TalkSwitch

DESKTOP PHONE SYSTEM

User Guide

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1 Installing TalkSwitch

1.1 What's included with TalkSwitch

The TalkSwitch products come shipped with the following items.

1. The TalkSwitch Unit
2. AC Power Adapter (Warning: never use any other Power Adapter other than the one provided with the TalkSwitch.)
3. 9 pin Serial Cable
4. 6' RJ-11 Telephone Cable - (2)
5. Software CD (This contains the configuration software and manual)
6. Quick Reference Cards - (Local Extension Use)
7. TalkSwitch Memory Card (optional purchase for TalkSwitch 48 models)

If any of these items are missing, please contact your reseller.

The TalkSwitch Line jacks are sensitive to high voltage spikes from lightning. If you live in an area where electrical storms occur regularly, we recommend that you protect TalkSwitch by plugging the telephone cords coming from the TalkSwitch line jacks to a surge protection device connected to the incoming telephone lines.

When you first receive TalkSwitch and live in an area with cold temperatures, *do not plug TalkSwitch into a power outlet* until the system has warmed to room temperature. Otherwise condensation could build up on the electronics and cause damage when powered up.

1.2 Front Panel Descriptions

TalkSwitch's front panel consists of a power button ("Power") and 5 LED lights that do more than let you know TalkSwitch is plugged in and turned on.

What do the LED lights tell you?

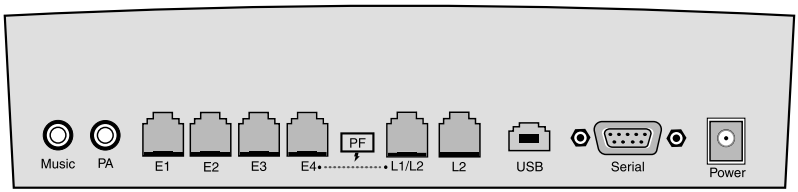
LED light:	State	Description
Line 1	On Solid	Line 1 is currently in use.
	Pulsing Slowly	The Line 1 caller is on hold.
	Flickering	Line 1 is ringing.
	Quick Pulse	Line 1 is engaged by another device on the line.
Line 2	On Solid	Line 2 is currently in use.
	Pulsing Slowly	The Line 2 caller is on hold.
	Flickering	Line 2 is ringing.
	Quick Pulse	Line 2 is engaged by another device on the line.
Power / Data	On Solid	TalkSwitch is powered on.
	Flickering	The PC connected (via Serial or USB) to TalkSwitch is either sending or retrieving information from TalkSwitch.
	Pulsing Slowly	Global Message Waiting Indicator (optional).
Line 3*	On Solid	Line 3 is currently in use.
	Pulsing Slowly	The Line 3 caller is on hold.
	Flickering	Line 3 is ringing.
	Quick Pulse	Line 3 is engaged by another device on the line.
Line 4*	On Solid	Line 4 is currently in use.
	Pulsing Slowly	The Line 4 caller is on hold.
	Flickering	Line 4 is ringing.
	Quick Pulse	Line 4 is engaged by another device on the line.

* Line 3 and 4 lights apply to TalkSwitch 48 models

1.3 Back Panel Descriptions

Before connecting all your phones and lines to TalkSwitch, you may want to proceed with configuring the unit first. (See section 2.1) This will minimize the disruption time for your telephone lines while setting up the system.

1.3.1 The TalkSwitch 24



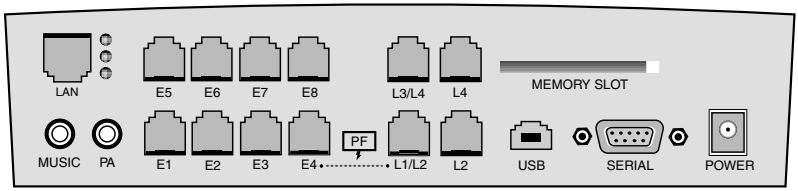
Jacks/Ports	What to plug in
MUSIC	Plug in a radio, CD player, PC soundcard or any other device that emits an audio signal if you wish to use TalkSwitch's Music-on-Hold feature. This is a 1/8" (3.5 mm) phono jack. Mono cables are recommended.
PA	Connect to a P.A. system if you wish to use the external paging feature. This is a 1/8" (3.5 mm) phono jack. Mono cables are recommended.
E1, E2, E3, E4	Plug in any analog device that uses a standard (RJ-11) telephone jack, such as: telephones, answering machines, fax machines, internal or external PC modems. Once these devices are plugged in TalkSwitch will recognize them as Ext. 111, Ext. 112, Ext. 113, or Ext. 114. Consider connecting the receptionist's phone to Extension 114 as this will allow for calls to be received or made through Line 1 of TalkSwitch.
L1/L2, L2	This is where you plug in your telephone lines (RJ-11). If you have 2 lines out of 1 phone jack, you can plug into the L1/L2 jack. *Use a surge protector if you live in an area prone to lightning strikes.*
USB	Use the USB port if your PC supports USB connectivity. If you use the USB port, you cannot use the serial port simultaneously. Windows 2000/XP currently not supported for USB connectivity.

SERIAL	Attach the supplied serial cable (RS232) that connects TalkSwitch to your PC. If you use the serial port you cannot use the USB port simultaneously.
POWER	Plug the supplied AC Power Adapter in here. Rating: 16VAC 1.1 A output. Do not use any other power adapter as this may cause damage.

By default, TalkSwitch is set to Serial connection. To activate USB connection, dial #91# from an extension then reset TalkSwitch. To return to Serial connection, dial #90# and reset TalkSwitch.

The 'PF' box in between E4 and L1/L2 represents power failure support. In the event of a power failure or loss of power to TalkSwitch, Extension 114 will be able to receive calls and make calls on Line 1.

1.3.2 The TalkSwitch 48



Jacks/Ports	What to plug in
MUSIC	Plug in a radio, CD player, PC soundcard or any other device that emits an audio signal if you wish to use TalkSwitch's Music-on-Hold feature. This is a 1/8" (3.5 mm) phono jack. Mono cables are recommended. If you have multiple TalkSwitch units on a LAN, you will need to provide a music source to each TalkSwitch.
PA	Connect to a P.A. system if you wish to use the external paging feature. This is a 1/8" (3.5 mm) phono jack. Mono cables are recommended. If you have multiple TalkSwitch units on a LAN, you will need to provide a connection from each TalkSwitch to the PA Amplifier.

LAN PORT	You can connect to an Ethernet hub using a Category 5 cable with RJ-45 connectors. This will support configuration across the LAN. If you have 2 or more TalkSwitch 48 units, you can 'network' them and they will function as a single system. There are 3 LEDs next to the LAN port. The top LED is on when a link has been established with any TalkSwitch or PC running TalkSwitch software. The 2nd LED is on when data is being received and the 3rd LED is on when data is being transmitted.
E1 - E8	Plug in any analog device that uses a standard (RJ-11) telephone jack, such as: telephones, fax machines, internal or external PC modems, etc. TalkSwitch identifies the extensions as 1x1 to 1x8. (x represents the unit ID number assigned to that TalkSwitch unit). By default all TalkSwitch units are shipped with a unit ID = 1. This means the extensions are 111 to 118. If it had unit ID 2 then they would be 121 to 128. *For details on setting up 2 or more units on a LAN to operate as 'networked' units, please see section 1.5.*
L1/L2, L2, L3/L4, L4	This is where you plug in your telephone lines (RJ-11). If you have 2 lines out of 1 phone jack, you can plug into the 1/2 and 3/4 jacks. *Use a surge protector if you live in an area prone to lightning strikes.*
USB	Use the USB port if your PC supports USB connectivity. If you use the USB port, you cannot use the serial port simultaneously. Windows 2000/XP currently not supported for USB connectivity.
SERIAL	Attach the supplied serial cable (RS232) to connect TalkSwitch to your PC.
MEMORY SLOT	Memory expansion slot. Used to expand internal memory for voicemail and Auto Attendant messages. TalkSwitch Memory cards can be purchased from your local TalkSwitch reseller. Simply place the memory card in the slot and TalkSwitch will automatically detect and start using the extra memory within 20 seconds.
POWER	Plug the supplied AC Power Adapter in here. Rating: 16VAC 1.1 A output. Do not use any other power adapter as this may cause damage.

By default, TalkSwitch is set to Serial connection. To activate USB connection, dial #91# from an extension then reset TalkSwitch. To return to Serial connection, dial #90# and reset TalkSwitch. No commands are required to use the LAN connection.

The 'PF' box in between E4 and L1/L2 represents power failure support. In the event of a power failure or loss of power to TalkSwitch, Extension 114 will be able to receive calls and make calls on Line 1.

1.4 Plugging into the Back Panel

1.4.1 Attaching telephone lines to TalkSwitch line jacks

You can connect your telephone lines from the wall jack(s) to the TalkSwitch Line jacks with the phone cables provided. Take note of which telephone line is connected to which Tel Line number - this information will be used in the configuration section. In order to minimize disruption to your business, you may want to configure TalkSwitch first before connecting it to your lines and phones.

TalkSwitch works with many telephone company services such as 3-Way Calling and Distinctive Ring. For more information on phone company services, see Appendix B.

1.4.2 Attaching phones and other devices to TalkSwitch extension jacks

You can connect any analog device (regular telephone, cordless phone, fax machine, answering machine, modem) to TalkSwitch's extension jacks. Multiple devices can be connected to each extension jack by 'chaining' them together or using a line splitter.

To Attach a Single Line Corded or Cordless Telephone, Fax Machine or Answering Machine:

Connect your single line analog telephone or fax machine to one of TalkSwitch's extension jacks (E1 to E4 for the TalkSwitch 24 and E1 to E8 for the TalkSwitch 48) just as you would if you were plugging them into a standard telephone wall jack.

To Attach a Two-line Telephone:

Option # 1 (Use it as one TalkSwitch extension.)

Disregard the telephone's Line 2 jack (plug-in). Connect the telephone's Line 1 plug-in to any one of TalkSwitch's extension jacks. You will still be able to access both telephone lines in the same manner as if you were using a single line telephone attached to TalkSwitch.

Option # 2 (Use it as two TalkSwitch extensions.)

You could use your two-line telephone as two separate TalkSwitch extensions. Connect the telephone's Line 1 and Line 2 plug-ins to two separate extension jacks.

Most two-line phones have separate plug-ins for two incoming telephone lines (Line 1 and Line 2). If your two-line telephone does not have separate plug-ins, you can use a "Line 1/Line 2" line splitter to separate the two lines. Download the Quick Guide at www.talkswitch.com for more detailed examples on connecting multi-line phones.

To Attach an Internal or External Modem:

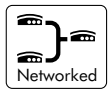
Simply plug the modem's telephone cable into one of TalkSwitch's extension jacks. Your modem is now a TalkSwitch extension and will be able to access all lines and take advantage of TalkSwitch's call routing features.

If you would like to use a telephone on the same extension as your modem, simply plug the telephone's cable into the modem's telephone jack. (Most modems have a telephone jack, located beside the 'Line In' jack.)

You do not have to attach a PC to TalkSwitch (via the Serial or USB ports) for your modem to be functional.

If you don't want to change your dial up settings for the modem, you will need to enable Direct Line Access for the extension associated to the modem. See section 2.3.1.4 for more details on configuring Direct Line Access.

1.4.3 Connecting Devices to the Music and PA Jacks



The Music jack is designed to support any audio source (CD player, radio, tape player, sound card etc.) for playing music or messages to callers while on hold. Simply connect the audio source via its headphone output to the Music jack. The Music jack requires a 1/8'' (3.5mm) phono connector. If you have more than one TalkSwitch connected to a LAN, you will need to provide audio to all the Music jacks on each TalkSwitch.

The PA jack can be connected to a PA System for external paging or to an amplification system to screen voicemail or to use as a line simulator. The PA jack requires a 1/8'' (3.5mm) phono connector. If you have more than one TalkSwitch connected to a LAN, you will need to provide a connection from each TalkSwitch to the PA system.

1.4.4 Connecting TalkSwitch to a PC

There are four ways to connect TalkSwitch directly to your PC for configuration - Serial, USB (Windows XP, 2000 excluded), Ethernet (LAN port), and remotely using a dial up modem.

Serial: Use the provided serial cable (RS232) to connect TalkSwitch to an open COM port on your PC.

USB: Use a USB cable to connect TalkSwitch to an available USB port on your PC or USB hub.

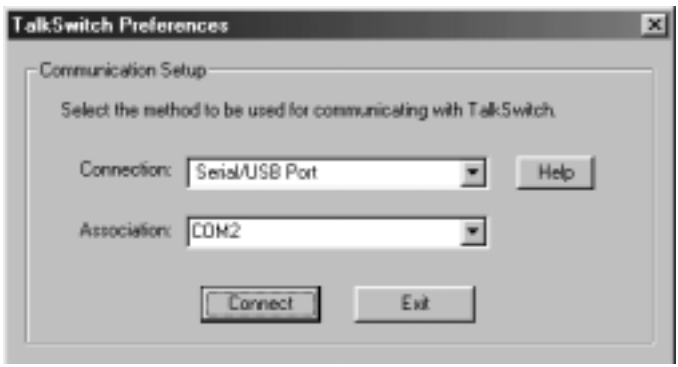
Ethernet: With the TalkSwitch 48 models, TalkSwitch can be configured using a PC connected to the same LAN as your TalkSwitch units. TalkSwitch cannot be configured from the Internet.

Modem: Using a PC with a dial up modem and running the TalkSwitch configuration software, you can choose to call TalkSwitch from anywhere in the world then connect and configure the system.

1.4.4.1 Connecting TalkSwitch to a PC using a Serial cable

If you have an available Serial port, then connect TalkSwitch to your PC using the Serial cable provided with TalkSwitch. By default, TalkSwitch is shipped with the Serial port enabled and the USB port disabled so you do not have to do anything to get it working using the Serial port.

If you were previously using USB and are switching back to Serial connection, then you will need to switch TalkSwitch back to Serial mode. Pick up a phone connected to one of TalkSwitch's local extensions and dial # to enter command mode. If you have an administrator password enabled, enter the password. Dial 90 then # to enable the Serial connection. Next, turn TalkSwitch off then back on again to activate the Serial connection..



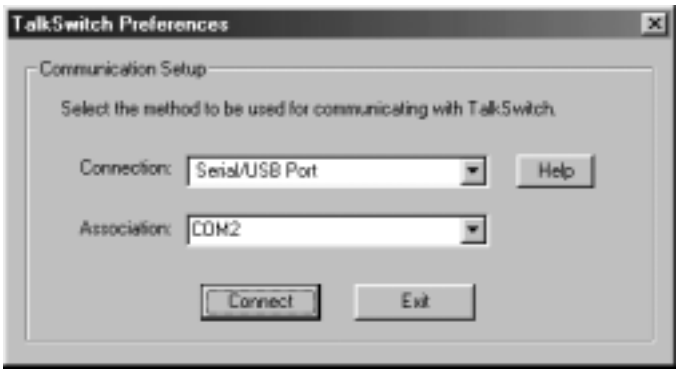
When you run the TalkSwitch software, you will need to select 'PC Connection' to select Serial as the connection then select the COM port associated to this physical Serial port on your PC.

Make sure you do not have any other communications programs running at the same time you want to use the TalkSwitch configuration software. These may include Palm Pilot, Hot Sync, TalkWorks, Digital Camera software. These programs tend to 'hold' onto COM ports and not make them available for any other programs.

If you are having problems communicating with TalkSwitch, please check the Troubleshooting section of the manual.

1.4.4.2 Connecting TalkSwitch to a PC using a USB cable

If you have an available USB port and cable and are not running Windows 2000 or XP on your PC, then connect TalkSwitch to the PC using the USB cable*. Next, pick up a phone connected to one of TalkSwitch's local extensions and dial # to enter command mode. If you have an administrator password enabled, enter the password. Dial 91then # to activate the USB connection. Next, turn TalkSwitch off then back on again to activate the USB drivers.



Make sure you do not have any other communications programs running at the same time you want to use the TalkSwitch configuration software. These may include Palm Pilot, Hot Sync, TalkWorks, Digital Camera software. These programs tend to 'hold' onto COM ports and not make them available for any other programs.

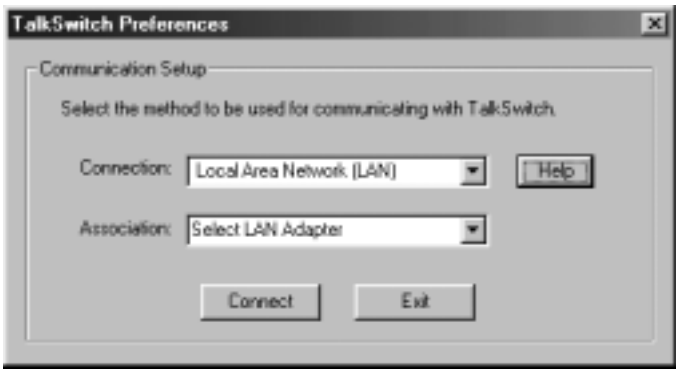
* USB cable not provided.

1.4.4.3 Connecting TalkSwitch to a LAN

If you want to connect multiple TalkSwitch units to a LAN, please see section 1.5

To connect TalkSwitch to a LAN for configuration purposes, simply use a standard Category 5 cable with RJ45 connectors on either end. Once TalkSwitch is connected to the hub, the top LED will light only when a computer running the TalkSwitch software establishes a connection with TalkSwitch. This LED lets you know TalkSwitch and your PC are able to communicate.

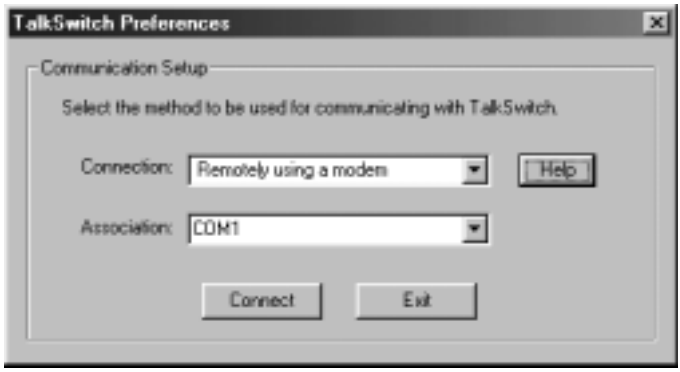
When you run the TalkSwitch software, you will need to select 'PC Connection' to select LAN as the connection then select the LAN adapter on your PC. You do not have to enter any commands from a local extension on TalkSwitch to enable LAN connectivity. Make sure you are using TalkSwitch Firmware 1.37 or higher to configure across the LAN.



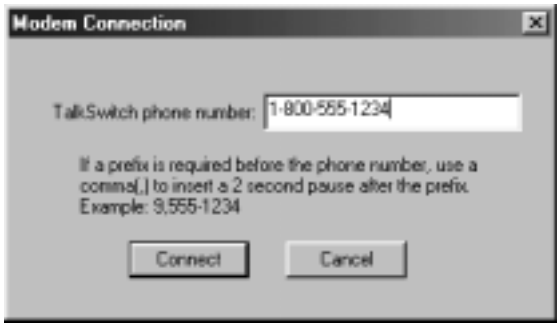
If you are running Windows XP, please make sure you are not using Windows 98 compatibility mode. Anytime TalkSwitch is being configured, it is 'locked' so that no other computer or person using a phone can make configuration changes at the same time. If you leave the software open for longer than 1 hour, TalkSwitch will automatically unlock itself to allow configuration changes.

1.4.4.4 Connecting to TalkSwitch from a remote location using a modem

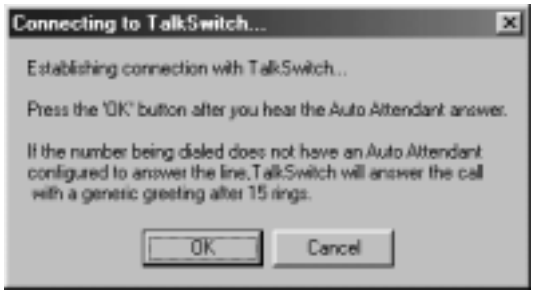
TalkSwitch can be configured remotely using any PC with a modem and TalkSwitch software installed. Version 1.37 or higher of the software and version 2.37 or higher of the firmware support modem connectivity.
To configure remotely using a modem, you should first ensure that you have at least version 2.37 of the firmware loaded on TalkSwitch. Next, using the software that matches the firmware (ie. if the firmware version on TalkSwitch is 2.37, then the software version should be 1.37) click on 'PC connection' after running the software. Select 'Remotely using a modem' for the connection then the associated COM port for that modem.



Next, click connect and another screen will appear where you will need to enter the phone number for one of the lines connected to TalkSwitch. In order for the modem to establish a connection, an Auto Attendant needs to answer on the line you are dialing in on. If you do not have an Auto Attendant set to answer on any of the lines, TalkSwitch will answer with a generic greeting after 15 rings so that you can still get into the system to access voicemail or make configuration changes.


Modem Connection
TalkSwitch phone number:
1-800-555-1234
If a prefix is required before the phone number, use a comma(,) to insert a 2 second pause after the prefix.
Example: 9,555-1234
Connect
Cancel

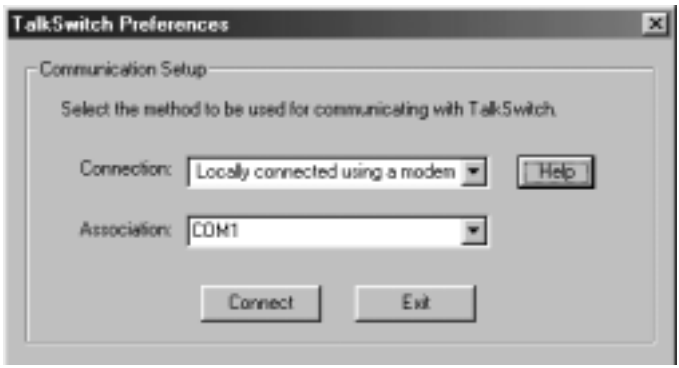
Once you have entered the phone number, click 'Connect'. The TalkSwitch software will now try to communicate with your modem to establish a connection. The following screen should appear after it has successfully dialed the phone number to TalkSwitch.


Connecting to TalkSwitch...
Establishing connection with TalkSwitch...
Press the 'OK' button after you hear the Auto Attendant answer.
If the number being dialed does not have an Auto Attendant configured to answer the line, TalkSwitch will answer the call with a generic greeting after 15 rings.
OK
Cancel

1.4.4.5 Connecting to TalkSwitch from a local extension using a modem

TalkSwitch can be configured locally using any PC with a modem connected to TalkSwitch and has the TalkSwitch software installed. Version 1.37 or higher of the software and version 2.37 or higher of the firmware support modem connectivity.

Run the TalkSwitch software then click on 'PC connection'. Select 'Remotely using a modem' for the connection then the associated COM port for that modem.



No phone number is required since the modem is connected to TalkSwitch when the modem goes 'off-hook'. The connection should be established very quickly.

1.5 Using 2 or more TalkSwitch units on a LAN

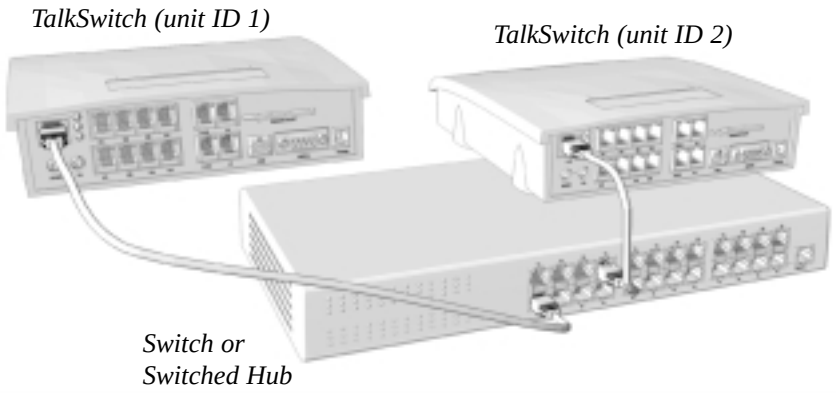
If you have only one TalkSwitch unit, ignore this section and proceed to Section 2.

1.5.1 Connecting 2 or more TalkSwitch units to a LAN

Option 1 - Connect to switch or switched hub in coexistence with your PCs.

We recommend integrating your phone system into your existing LAN with a switched hub. A switch or switched hub provides direct communication between TalkSwitch units, thus keeping the TalkSwitch voice over LAN data isolated from other data on the network.

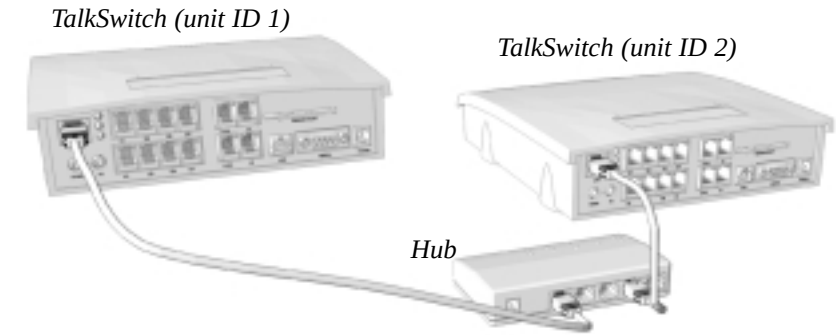
Connect up to four TalkSwitch units (2 are shown on the following page) to the LAN switch or switched hub.



Make sure a computer is connected to the phone system either via the LAN or directly from the computer to the TalkSwitch through the USB or Serial port.

Option 2 - Connect to regular hub dedicated to TalkSwitch units

If you don't have a switch we suggest you use a small hub on a dedicated LAN to network the TalkSwitch units. You can connect a computer to this hub for TalkSwitch configuration purposes, as this hub should not be shared with heavy LAN traffic.



Connect up to four TalkSwitch units (2 are shown here) to the LAN hub.
Make sure a computer is connected to the phone system either via the LAN or directly from the computer to the TalkSwitch through the USB or Serial port.

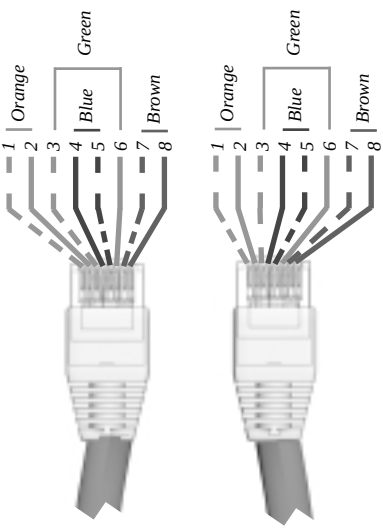
Option 3 - Connect 2 units together via an Ethernet cross-over cable.

If you plan to network only two TalkSwitch units, it is possible to network them via a LAN crossover cable.

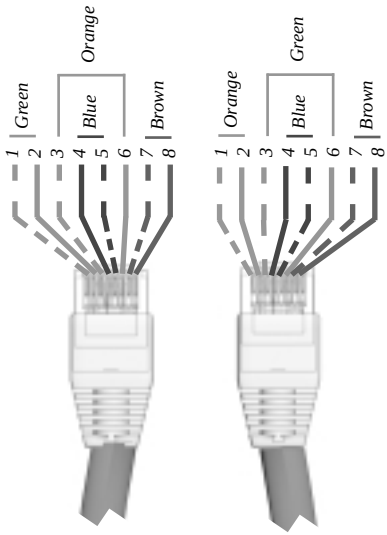
Connect the two TalkSwitch units with a crossover cable. Make sure you are using a crossover cable and not a regular LAN cable - see diagram below for details on how to verify a crossover cable.

Crossover Cable

Make sure a computer is connected to the phone system either via the USB or Serial port.



Straight through cable:
Notice how both ends are identical



Crossover cable:
The ends are different. Pins 1 & 3 are reversed, and pins 2 & 6 are reversed.

1.5.2 Setting the Unit ID for the first time

When units are shipped from the manufacturer, they are all programmed with Unit ID 1. If two or more units are placed on the same LAN and 2 or more have the same Unit ID number, then there will be a conflict. TalkSwitch identifies this conflict by flashing all the Line lights on the front panel of the units that have the conflict.

To resolve the conflict, you need to assign a different Unit ID to one or more of the units. Pick up a telephone handset connected to one of the extension jacks on the TalkSwitch unit that you want to assign a different Unit ID. You will immediately hear a system prompt indicating that there is a conflict and a new Unit ID needs to be chosen. Select an available Unit ID between 2 and 4 (odds are that you are keeping the Unit ID of the 1st unit set to 1).

Next, the system should indicate that the update was successful and the front panel lights should stop flashing after several seconds. When none of the front panel 'Line' lights are flashing, then all units are ready for network use.

No IP configuring is required since TalkSwitch units do not use the TCP/IP protocol. TalkSwitch units cannot communicate with any other units beyond the LAN. If you need to configure remotely, you can use the remote modem option to connect from a remote location.

1.5.3 Changing the Unit ID

If you need to change the Unit ID of any TalkSwitch system, you can first press # from a Local Extension to enter command mode, enter a password if necessary, then dial 0 0#. The system will respond with the Unit ID of that particular TalkSwitch. To change the Unit ID, use any of the following commands once in command mode:

Unit ID	DTMF Command
1	01#
2	02#
3	03#
4	04#

1.5.4 Unit IDs and how they affect system extension numbers

When more than one TalkSwitch is connected to a LAN and they operate in networked mode, several of the extensions and voicemail have different numbers based on the Unit ID assigned to the TalkSwitch unit they belong to.

The extensions and voice mailboxes affected by the new numbering system are listed in the following table.

	Unit ID 1	Unit ID 2	Unit ID 3	Unit ID 4
Local Extensions	111-118	121-128	131-138	141-148
Remote Extensions	211-218	221-228	231-238	241-248
Local Mailboxes	111-118	121-128	131-138	141-148
Remote Mailboxes	211-218	221-228	231-238	241-248
General Mailboxes	410-419	420-429	430-439	440-449

As you may have noticed, none of the Extension Ring Groups are affected since they are global to the entire system. It doesn't matter if there is one or four TalkSwitch units on a LAN, there will always be 10 Extension Ring Groups with the extension numbers 300-309.

1.5.5 Keeping track of the lines and extensions

To keep track of the extensions and lines connected to each TalkSwitch, you may want to label each unit with it's respective Unit ID. This will simplify matters when it comes to adding or removing extensions and lines.

In the event the TalkSwitch units are located in a room away from the extensions and you need to identify which unit is which, there is a utility in the configuration software that will allow you to identify each unit by flashing the lights on the front panel. When the configuration software is opened, you can check details of the TalkSwitch units on the LAN by clicking on the 'LAN Details' button.

In the pop up window, you can select a Unit ID, then click the Identify button to have the lights flash on that unit. The lights will stop flashing when you click 'finished' or 5 minutes have elapsed.

1.5.6 Optimizing the system for networked use

TalkSwitch is designed to be as robust as possible for the price point. Keeping this in mind, there is a limitation as to how many calls can be placed across the LAN from each unit. This is known in the industry as a blocking architecture.

Each TalkSwitch unit can support up to 6 simultaneous calls through it's LAN port. This technique allows the systems to work as they should more than 99% of the time since it is rare that more than 6 calls would need to cross from one unit to 1 or more other units simultaneously. With the current design, this means that a total of 12 calls (using 4 units) can run simultaneously across the LAN.

As an example, if 2 units are connected on a LAN, 4 calls can come into all four lines on one unit and be directed across the LAN to the other unit's extensions or lines while 2 intercom calls can also cross the LAN. In the event that an inbound call cannot be directed across the LAN because all paths are blocked, TalkSwitch will handle the call according to the 'Busy at extension' Call Cascade option for the selected extension. (See sections 2.3.3.4, 2.3.3.5, 2.3.3.6)

TalkSwitch has been designed to operate optimally when in a networked state. Here are a few items that have been designed for better network use:

Configuration Settings:

All units are 'cloned' with identical settings. In the event that another unit has 'disappeared' off the network (adaptor unplugged, LAN connection disconnected, LAN failure etc...), the system can still handle the calls according to the settings programmed at other extensions that belong to TalkSwitch units not visible to the unit handling the call. In the event an extension or voice mailbox cannot be reached, the caller will hear the following system prompt: ''The extension you are trying to reach is currently unavailable, please try again later.''

Outgoing Line Hunt Groups

By default, when 2 or more units are on a LAN, the system tries placing calls out on the same TalkSwitch unit the call originates. This avoids using a line across the LAN on another unit which helps to minimize the LAN traffic and optimizes the opportunity for all inbound calls to connect across the LAN if required.

Auto Attendants

There are a total of 9 Auto Attendants that are shared by all units on the LAN. When an Auto Attendant is recorded on any unit, it is then automatically copied to all other units on the LAN. This design minimizes LAN traffic and also provides functionality back-up in case a unit or multiple units have 'disappeared' off the network (adaptor unplugged, LAN connection disconnected, LAN failure etc...). In this event, all systems can still answer inbound calls with the same Auto Attendant messages).

Voicemail

All Local Extension and Remote Extension voicemail data is stored on the unit where the extensions normally reside. For example, all greetings, directory names and voicemail messages for extensions 121-128, 221-228 and mailboxes 420-429 are stored on the TalkSwitch with Unit ID 2. If a unit is completely filled with voicemail messages, new messages will not be stored on other units. The system will simply not accept anymore messages for mailboxes belonging to that unit. If you need more memory, TalkSwitch Memory Cards can be purchased from your reseller. You can also use the Voicemail Memory Manager to view the memory usage of each TalkSwitch unit and each mailbox.

2 Configuring TalkSwitch

2.1 Installing the TalkSwitch Configuration Software

Insert the TalkSwitch CD into your CD drive. The Install program will automatically launch. If the software does not launch automatically, you can use Windows Explorer to explore your CD-ROM drive. Double-click the Setup.exe file then follow the instructions on the screen. If you are installing on a Windows XP machine, do not enable Windows 98 compatibility mode for the TalkSwitch software.

Configuration software system requirements:

PC running Windows 95/98/ME/XP*/2000*

20 MB free hard disk space

32 MB RAM

An available Serial or USB port (Required for Firmware updates)

800 x 600 minimum video resolution

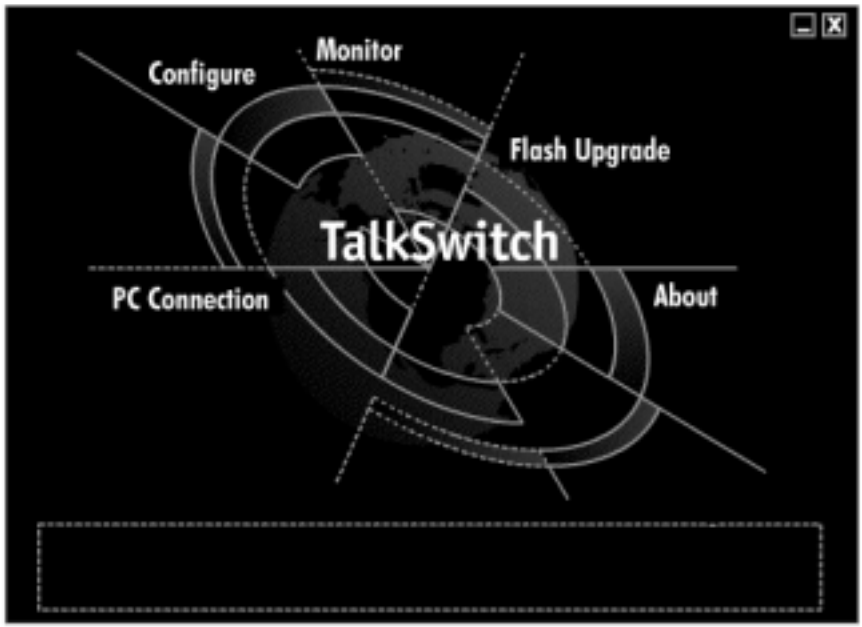
If you are having problems retrieving the settings from TalkSwitch, please check the Troubleshooting section of the manual.

* USB not currently supported for Windows 2000 or Windows XP. You will need to use the serial or LAN connection for configuration purposes.

In some cases, Windows may find a device called “Creatix V90 modem” and install drivers for this device. TalkSwitch is powered by a modem chipset, but does not act as a modem, so the drivers do not need to function properly. Simply let the install proceed so that you are not bothered by Windows detecting new hardware every time you reboot your PC.

2.2 Control Center

After installation is complete, double-click the TalkSwitch icon. Once the TalkSwitch software is open, the following screen will appear. This is the Control Center for the TalkSwitch software.



PC Connection:

Choosing *PC Connection* allows you to choose the correct COM port when connecting TalkSwitch to the PC. USB will appear as a COM port as well. You can also configure the TalkSwitch 48 Models across the LAN or by using a modem.

Configure:

Choosing *Configure* brings up the configuration software. (see section 2.3) Note: You cannot configure TalkSwitch by phone while the software is open.

Monitor:

Choosing *Monitor* brings up the TalkSwitch Monitor window. The Monitor allows you to 'see' a graphical representation of the calls as they flow to and from TalkSwitch and its extensions and lines. This feature is useful as a diagnostic tool when testing your TalkSwitch settings. You should choose 'Normal' as the mode of operation unless you are using TalkSwitch as a Line Simulator.

Flash Upgrade:

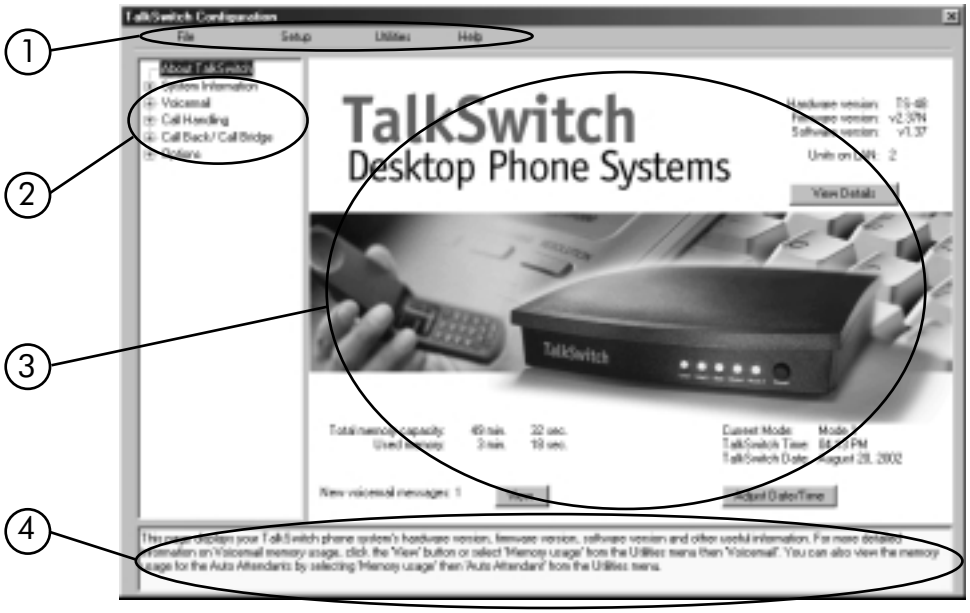
This activates the TalkSwitch Firmware Update procedure. Follow the instructions accordingly.

About:

Displays useful information including the TalkSwitch software, firmware and hardware version numbers.

2.3 Configuration

From the Control Center choose Configure. The following screen will appear:



The configuration screen consists of 4 parts:

1. Menu Items

2. Configuration Navigation

Controls what is displayed in the configuration window.

3. Configuration Window

Displays configuration tabs.

4. iGuide Window

Displays helpful information about what is displayed in the configuration window.

Menu Items - File

Retrieve settings:

Retrieves settings from TalkSwitch connected to the PC.

Open File...

Opens existing configuration files from the PC. Default configuration files are included with the software. TalkSwitch also backs up to a file called "LastSavedConfig.dat" every time you save settings to TalkSwitch.

Save to TalkSwitch

Saves the current configuration to TalkSwitch.

Save to file...

Saves the current configuration to a file.

Exit

Closes the Configuration and returns to the Control Center.

Menu Items - Setup

Set active mode

Changes the current mode of operation.

Add Local Extension

Allows you to easily configure a new Local Extension.

Add Remote Extension

Allows you to easily configure a new Remote Extension.

Add Ring Group

Allows you to easily configure a new Ring Group.

Defaults...

The feature brings up a dialog box which allows you to change the current information in the Configuration window to its defaults, or change the whole configuration to its defaults.

Menu Items - Utilities

Memory Usage:

Displays a dialog box showing internal memory usage for Voicemail or Auto Attendant messages.

Voicemail Manager:

Displays a dialog box giving you options to check the status of all voicemail, delete a mailbox password, and reset mailboxes (this resets the mailbox back to factory default and clears all messages and greetings).

Menu Items - Help

TalkSwitch Help:

Opens the TalkSwitch Help file. You can search through the contents for useful information. Help is also accessible by pressing the 'F1' key while the Configuration is open.

Support on the Web:

Launches your browser and directs you to our support site.

About TalkSwitch:

Displays the TalkSwitch software version number, TalkSwitch firmware version number and Copyright information.

Configuration Navigation

The Configuration Navigation organizes all the configuration topics within folders. initially. The following is a brief description of each configuration folder:

About TalkSwitch

This tab displays version information about the TalkSwitch software, firmware and hardware. It also displays memory usage with details about voicemail messages and Auto Attendants.

System Information

This folder allows you to configure the system setup. This includes activating lines, extensions and music-on-hold.

Voicemail

This folder allows you to configure each individual voice mailbox and also some global settings for the voicemail system.

Call Handling

This folder allows you to configure how you want incoming calls to be handled. It allows you to setup your Auto Attendants and individual call handling for each line and distinctive ring number for both operating modes.

Call Back / Call Bridge Settings

TalkSwitch's Call Back and Call Bridge features are configured from this folder. Both of these features can reduce your company expenses by reducing long distance costs.

Options

In this folder, advanced settings are configured including troubleshooting issues and various operating options. *Recommended for experienced users only.*

Configuration considerations when connecting multiple units to a LAN.

When 2 or more units are connected to a LAN and are setup for network use, you will have the ability to configure all units connected to the LAN via the Serial or USB connection to one of the TalkSwitch units, or using a PC connected to the same LAN as the TalkSwitch units.

When 2 or more TalkSwitch units are connected to the same LAN, they are designed to act like a single phone system. For example if you have 2 TalkSwitch units connected on the same LAN, the system will now function as a single system supporting 8 lines, 16 local extensions and 16 remote extensions.

You will notice that on some of the configuration pages, there will be up to 4 tabs across the top that allow you to select each TalkSwitch in the group depending on how many are connected to the LAN. This is the primary difference between configuring 1 unit and multiple units.

Sections of the configuration that have multiple tabs for each unit:

System Information
- Telephone Lines
- Local Extensions
- Remote Extensions

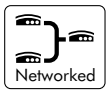
Voicemail
- Local Ext. Voicemail
- Remote Ext. Voicemail
- General Voicemail

Call Handling
- Telephone Lines
- Local Extensions
- Remote Extensions

Call Back / Call Bridge
- Auto Call Back

Options
- Audio Controls

Important:

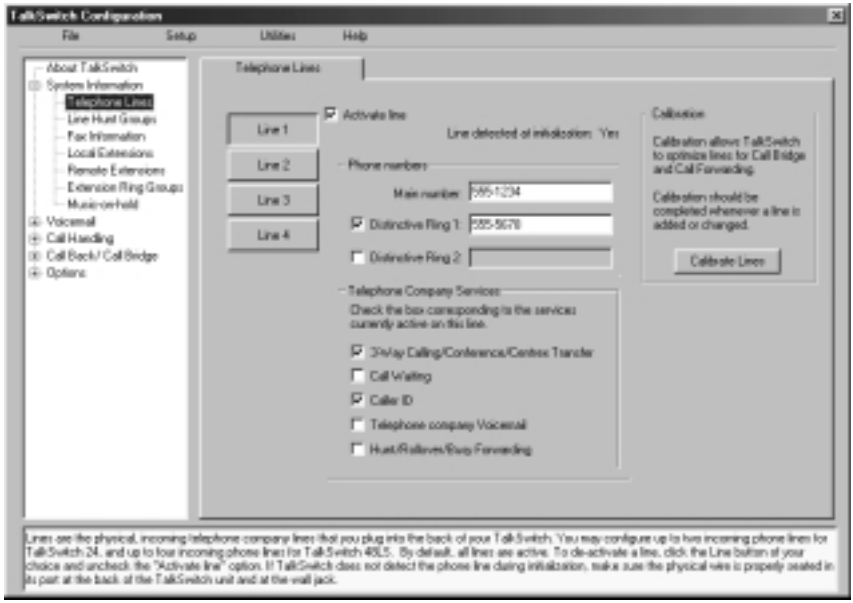


Anywhere in this manual where there are details specific to the use of TalkSwitch in a networked configuration, you will see the icon to the left. For people using only 1 TalkSwitch unit, you can ignore any of the comments associated with this icon.

2.3.1 System Information

2.3.1.1 Telephone Lines

This section tells TalkSwitch about the telephone lines plugged into its back panel. Simply select a line and fill in the information. For each line there is a status message (“Line detected at initialization”) indicating if TalkSwitch detected a line plugged into the associated line port. If a line is plugged into a line port and is not detected, check your telephone line, and then choose File>Retrieve settings to update the screen.


TalkSwitch Configuration
File
Setup
Utilities
Help
About TalkSwitch
System Information
Telephone Lines
Line Hunt Groups
Fax Information
Local Extensions
Remote Extensions
Extension Ring Groups
Music on Hold
Voicemail
Call Handling
Call Back / Call Bridge
Options
Telephone Lines
Line 1
Line 2
Line 3
Line 4
Activate line
Line detected at initialization: Yes
Phone numbers
Main number: 595-1234
Distinctive Ring 1: 555-5678
Distinctive Ring 2:
Telephone Company Services
Check the box corresponding to the services currently active on this line.
3-Way Calling/Conference/Centrex Transfer
Call Waiting
Caller ID
Telephone company Voicemail
Hunt/Rollover/Busy Forwarding
Calibration
Calibration allows TalkSwitch to optimize lines for Call Bridge and Call Forwarding.
Calibration should be completed whenever a line is added or changed.
Calibrate Lines
Lines are the physical, incoming telephone company lines that you plug into the back of your TalkSwitch. You may configure up to five incoming phone lines for TalkSwitch 24, and up to four incoming phone lines for TalkSwitch 48LS. By default, all lines are active. To de-activate a line, click the Line button of your choice and uncheck the "Activate line" option. If TalkSwitch does not detect the phone line during initialization, make sure the physical wire is properly seated in its port at the back of the TalkSwitch unit and at the wall jack.

If networked, you will need to configure the options for all the units. At the top of the page, you will notice the tabs for up to 4 TalkSwitch units labeled ‘TalkSwitch 1’, ‘TalkSwitch 2’, etc...

In the “Phone numbers” section:

Enter the 'main' telephone number for the appropriate line connected to TalkSwitch. Enable the Distinctive Ring Numbers 1 and/or 2 if you have this service on the current line and wish to have incoming calls handled 'differently' on the basis of the distinctive ring. If you want Distinctive Ring numbers handled the same way as your 'Main' number, do not place a check mark in the box.

Next, enter the 'Distinctive Ring' telephone number for each of the Distinctive Ring numbers associated to this line. Distinctive Ring 1 corresponds to any double ring pattern. Distinctive Ring 2 corresponds to any triple ring pattern.

In the "Telephone company services" section:

Select any of the Telephone Company Services that you *currently* have for each line. The following is an explanation of each service and the impact of selecting each option with respect to how TalkSwitch handles calls. For definitions and details on how to use these features with TalkSwitch, see Appendix B.

3-Way Calling/Conference/Centrex Transfer:

TalkSwitch can work with this service to forward calls to Remote Extensions or other external phone numbers while using the same line (Same Line Connect). You can also use this service as an option for bridging calls to external numbers when calling into TalkSwitch from the outside. If you find that you are having difficulties with line levels when forwarding calls to Remote Extensions or using Call Bridge, you should use 3-way calling to forward calls as a solution.

Call Waiting:

Check this box if you have Call Waiting service on the current line. It is recommended that you remove this service from your line(s) since there is no way for TalkSwitch to handle a second call on the same line while it is handling the first call. You may want to instead consider adding the Hunt/Rollover service to your lines.

Caller ID:

Check this box if the current line provides Caller ID information. TalkSwitch will pass along the Caller ID information to selected extensions. Also, TalkSwitch can use the time information provided by Caller ID to update TalkSwitch's internal clock. (see section 2.3.5.4).

Telephone Company Voicemail:

Check this box if you are subscribed to a Telephone Company Voicemail service. If this service is enabled on a specific line, calls can be routed to this voicemail service.

Hunt/Rollover:

Check this box if the current line is associated with a Line Hunt or Line Rollover service from the Telephone Company. In general, any lines that belong to a Hunt/Rollover group should be configured to handle calls the same way.

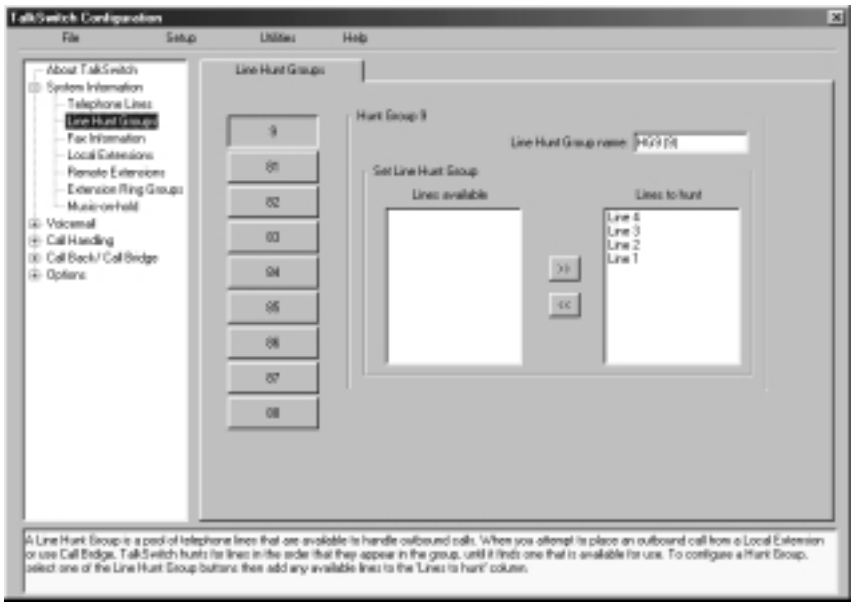
In the "Calibration" section:

After you have configured the lines, it is recommended that you calibrate the lines. Completing this procedure optimizes your telephone line volume levels for the Call Bridge and Call Forwarding (with Remote Extensions) features.

Note: Only lines that are detected can be calibrated.

2.3.1.2 Line Hunt Groups

There are a total of 9 Line Hunt Groups for controlling *outbound* call line selections. These Line Hunt Groups are used by the Local and Remote Extensions, and when using the Call Bridge feature. Each Hunt Group can support several line choices and will attempt to grab an available line in the order that they are listed (Lines to hunt) for that Hunt group. *These settings have no effect on incoming calls.*

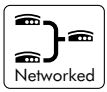


The default setup:

Hunt Group 9:	selects any available line
Hunt Group 81:	selects Line 1
Hunt Group 82:	selects Line 2
Hunt Group 83:	selects Line 3 (for the TalkSwitch 48 only)
Hunt Group 84:	selects Line 4 (for the TalkSwitch 48 only)

First select a Line Hunt Group then name the group(s) if desired.

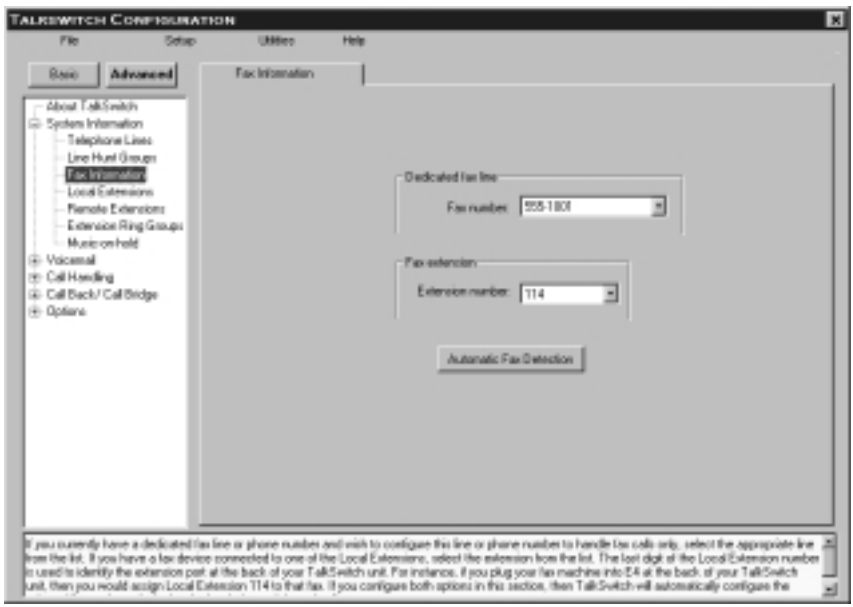
Under Set Line Hunt Group, select the lines you wish to add to the Hunt Group from the left column 'Lines available', then click the '>>' button to move it to the right column 'Lines to hunt'. Repeat this process for the other Hunt Groups. Lines will be hunted in the order they are listed from top to bottom.



If units are networked, you will notice the option 'Hunt lines on same unit first' is visible and checked by default. This feature helps optimize how TalkSwitch uses lines for outgoing calls. It is recommended that you keep this option engaged if you want to minimize 'blocking'. Blocking can occur if too many calls are placed across the LAN simultaneously. TalkSwitch systems can support up to 6 calls simultaneously. The likelihood of a call being blocked is very small for most people. In the event the system is loaded with calls and an inbound call cannot be directed across the LAN, the call will be handled according to the busy call cascade settings.

2.3.1.3 Fax Information

The information in this tab helps configure TalkSwitch to handle faxes.



If you have a dedicated fax line or a Distinctive Ring number for faxing associated to a line, please choose this 'Fax number' in the list. If you don't have a line dedicated for inbound faxing, select 'none'.

If you do not see your fax number in the list, make sure you have activated the appropriate line or Distinctive Ring number in the Telephone Lines section under System Information.

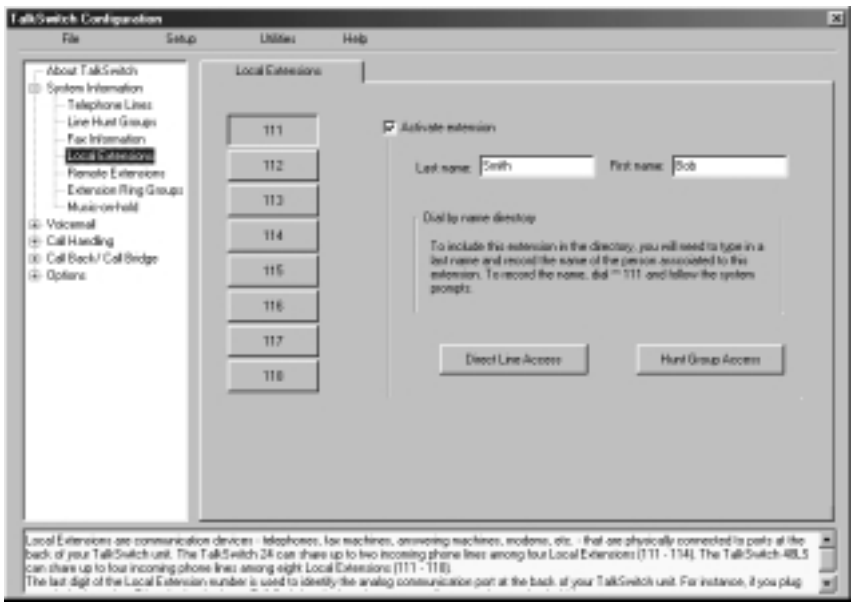
Next, select the extension number where you have your fax device connected. For example if you have your fax machine connected to E8 on the rear of the TalkSwitch, then select extension number 118.

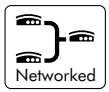
If your fax machine is connected to E8 on a TalkSwitch with Unit ID 2, then the fax extension number is 128. If you have a dedicated fax line or number, your fax machine should be connected to an extension jack on the same TalkSwitch unit where the fax line/number is connected.

By default, when both a dedicated line and fax extension have been selected for the first time, the software automatically configures the incoming call handling properties for that line to ring only the fax extension you specified on this page.

2.3.1.4 Local Extensions

Local Extensions are phones or devices connected to any of the extension jacks at the back of TalkSwitch. See sections 1.3 and 1.4 for more details on connectivity.





If you have 2 or more TalkSwitch units connected on a LAN, you will be able to select the tabs associated to each unit and see the extensions associated to that unit. If a TalkSwitch 48 unit has a Unit ID of 2, then the Local Extensions will be 121 to 128. The second digit for all Local and Remote extensions, Local, Remote and General voicemail represents the Unit ID of the associated TalkSwitch unit.

Select any of the extensions that you wish to configure.

Local Extensions are by default activated with the associated Voice mailbox. Voice mailboxes for each Local Extension can be de-activated in the Voicemail section in the System Information folder.

Last Name / First Name:

Enter the first and last name of the person associated to the extension. The last name is required if the person is to be included in the 'Dial by Name' directory listing used at the Auto Attendant level. The person using that extension must also record their name for the directory. Instructions for recording the name are listed in the interface. Whatever name is entered will appear on the Caller ID of another Local Extension during an intercom call.

Direct Line Access:

Direct line access allows you to configure the extension to access a specific Hunt Group automatically for outbound calls when the extension goes off hook. For example, you may have a fax machine connected to this extension and don't want to reprogram the speed dial phone numbers. In this case you would select 'Direct line access' and choose the appropriate Hunt Group. As soon as the fax goes off hook, TalkSwitch will hunt the specified lines for an available line. This feature is also useful if you want to avoid dialing any digits for accessing a line.

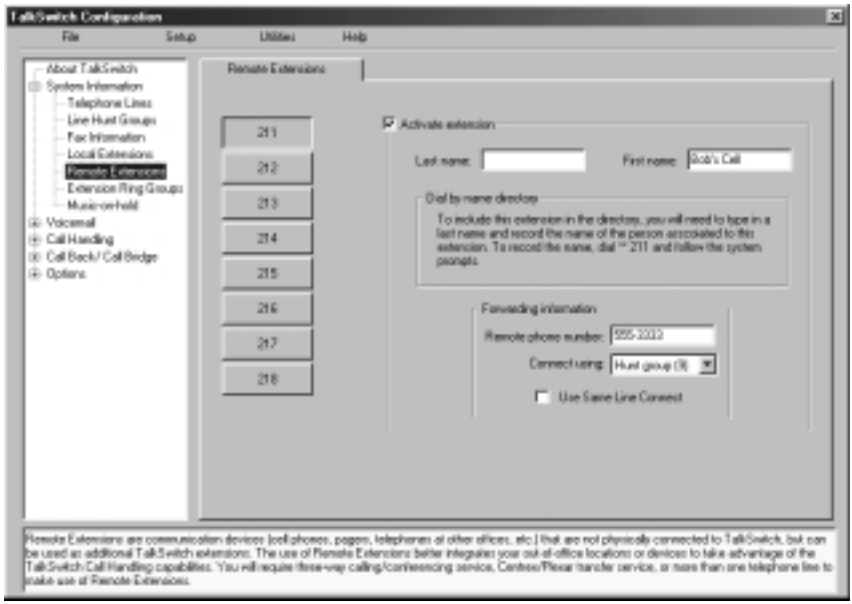
Warning: When using Direct Line Access, telephone company line dialtone is first available when picking up the handset. The following features are only available from TalkSwitch internal dialtone: Intercom Calling, Hold Retrieve, Line Hunt Groups, Voicemail Retrieval/Access, Call Pick Up, P.A. Access, Parked Call Retrieval, Do Not Disturb functions and entering Command Mode. **To obtain internal dialtone from an extension which has Direct Line Access enabled, dial *Flash* after going off hook.**

Hunt Group Access:

This is used if you want to permit or restrict specific Hunt Group access to the extension. Click the button and simply organize the appropriate Line Hunt Groups that are permitted for this extension. (All extensions are defaulted to have no restrictions.)

2.3.1.5 Remote Extensions

With TalkSwitch's Remote Extensions, you can have calls forwarded directly from your home/office to any phone number you choose. Your cell phone, pager or any out-of-office number becomes a 'Remote Extension' of your office system. You can have calls forwarded directly or screen callers. If you are unavailable or choose not to accept calls, they can be transferred back to your office (e.g. to voicemail or another extension) or forwarded to another out-of-office telephone number (e.g. to a business partner's cell phone) depending upon the Cascade configuration.


TalkSwitch Configuration
File
Setup
Utilities
Help
About TalkSwitch
System Information
Telephone Lines
Line Hunt Groups
Fax Information
Local Extensions
Remote Extensions
Extension Ring Groups
Music on Hold
Voicemail
Call Handling
Call Back / Call Bridge
Options
Remote Extensions
211
212
213
214
215
216
217
218
Activate extension
Last name:
First name:
Bob's Cell
Dial by name directory
To include this extension in the directory, you will need to type in a last name and record the name of the person associated to this extension. To record the name, dial * 211 and follow the system prompts.
Forwarding information
Remote phone number:
555-2222
Connect using:
Hunt group (9)
Use Same Line Connect
Remote Extensions are communication devices (cell phones, pagers, telephones at other offices, etc.) that are not physically connected to TalkSwitch, but can be used as additional TalkSwitch extensions. The use of Remote Extensions better integrates your out-of-office locations or devices to take advantage of the TalkSwitch Call Handling capabilities. You will require three-way calling/conferencing service, Centrex/Plexar transfer service, or more than one telephone line to make use of Remote Extensions.

TalkSwitch assigns a Remote Extension number to each call forwarding telephone number. Calls can then be forwarded by the Auto Attendant or transferred by someone in your office simply by dialing the Remote Extension number. There are 8 Remote Extensions available per TalkSwitch unit.

Networked

If a TalkSwitch has Unit ID 2, then the Remote Extension numbers are 221 - 228.

Choose a Remote Extension to configure. After you have activated a Remote Extension, you must enter a phone number in order for the extension to be considered active and usable by the system.

Last Name / First Name:

Enter the first and last name of the person associated to the extension. The last name is required if the person is to be included in the 'Dial by Name' directory listing used at the Auto Attendant level. The person using that extension must also record their name for the directory. Instructions for recording the name are listed in the interface.

Remote phone number:

Enter the phone number of the Remote Extension (note: no specific prefixes are required - put the number in just as though you were dialing it from a regular phone). You may use the following in the space provided: digits 0 - 9, space, comma, dash, # and *. Once a number has been entered, the rest of the options in this section will become 'ungreyed'.

Connect using:

Select the Line Hunt Group that TalkSwitch will use to connect to that Remote Extension. For example if you have an inexpensive long distance carrier setup for the lines in Hunt Group 84, you may want to use this Hunt Group for your long distance Remote Extensions.

Use Same Line Connect

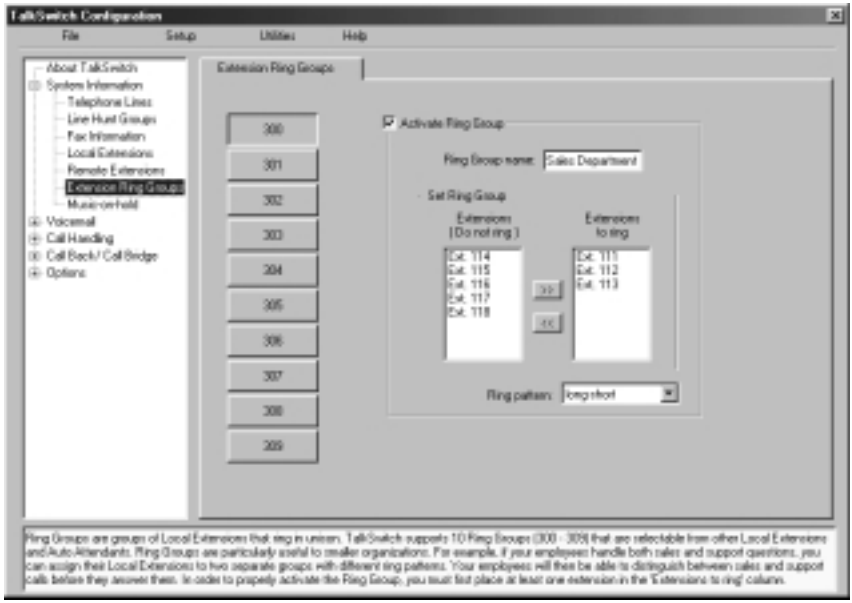
Clicking this option allows incoming calls, when forwarded to the Remote Extension, to use the same line in which the originating call came in. Using this feature allows only one line to be used when forwarding incoming calls to a Remote Extension. This feature can only be used when the line that the originating call came in on has the 3-Way Calling/Conference or Transfer (Centrex/Plexar) service. If the line does not have any of these services, the call will be forwarded using the Hunt Group chosen in the "Connect using:" section.

When using Same Line Connect, callers will hear silence while they are on hold since the callers are on hold at the Telephone Company and not at TalkSwitch. If you want callers to hear music while they are on hold for calls forwarded to Remote Extensions, do not use Same Line Connect. It's best to experiment with different settings in order to decide what works best for your configuration.

For details on how to use Remote Extensions, see section 3.3

2.3.1.6 Extension Ring Groups

There are a total of 10 Extension Ring Groups available for your use. Ring Groups are extensions 300 to 309. By default, extension 300 is configured to ring all extensions.



Different uses for Extension Ring Groups:

Example 1: You are the president of a company and you don't want to handle calls from the general public, yet you want to be alerted when your important colleagues try to contact you. Your regular Local Extension may be 111 for most people, but you can also configure a Ring Group such as extension Ring Group 300 to ring your extension with a different ring pattern. You then tell your colleagues to always choose extension 300 at the Auto Attendant or ask to be transferred to extension 300 when speaking to someone in the office. Now without being subscribed to Caller ID, you can tell just by how your phone rings if you consider the caller to be important or not.

Example 2: You have a company with several departments . You may want to configure Extension Ring Group 300 for the Sales Department, in which case it will ring extensions 111, 112, 113, and 114. You may want to also set up Ring Group 301 for Technical Support, in which case it will ring extensions 115 and 116.

First select an Extension Ring Group (300-309) that you would like to configure and activate it. You will notice that a Ring Group must have extensions listed in the 'Extensions to ring' section to allow access to the other information on the tab. If desired, name the extension in the 'Ring Group name' space.

Ring pattern:

Choose how you want the phone(s) to ring for the Ring Group.

In the "Set Ring Group" section:

To configure, select each extension that you wish to add to that Ring Group from the left column 'Extensions available', then click '>>' to move it to the right column 'Extensions to ring'. Repeat this process for each of the Extension Ring Groups activated. If you wish to remove an extension from a Ring Group, highlight that extension in the right column then click the '<<' button.

Extensions available:

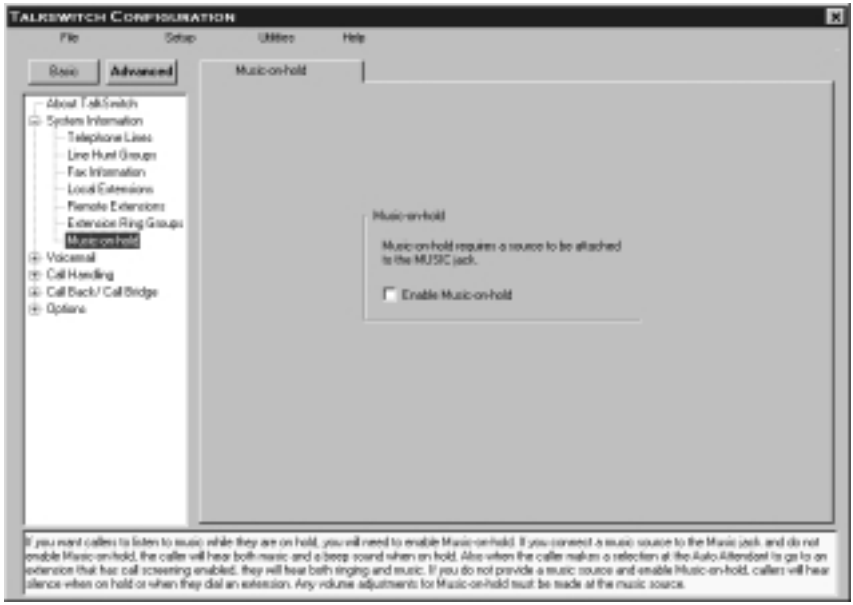
This is the list of available extensions from which the Extension Ring Group may be built. Only active extensions will be available to add to the Ring Group.

Extensions to ring:

This is the list of extensions that will ring when the Extension Ring Group is selected from the Auto Attendant or Local Extension. All extensions listed will ring simultaneously when this Ring Group is dialed from an extension or at the Auto Attendant.

2.3.1.7 Music-on-hold

If you wish to have callers listen to music or advertising while they are on hold, you will need to enable Music-on-hold in this tab.



Note: If you connect a music source to the Music jack and do not enable Music-on-hold, the caller will hear both music and a beep sound when on hold. Also when the caller makes a selection at the Auto Attendant to go to an extension that has call screening enabled, they will hear both ringing and music.

Networked

If you have more than one unit connected to the LAN, you will need to provide a music source to all units. A 1/8" audio splitter can usually be obtained at most electronics stores.

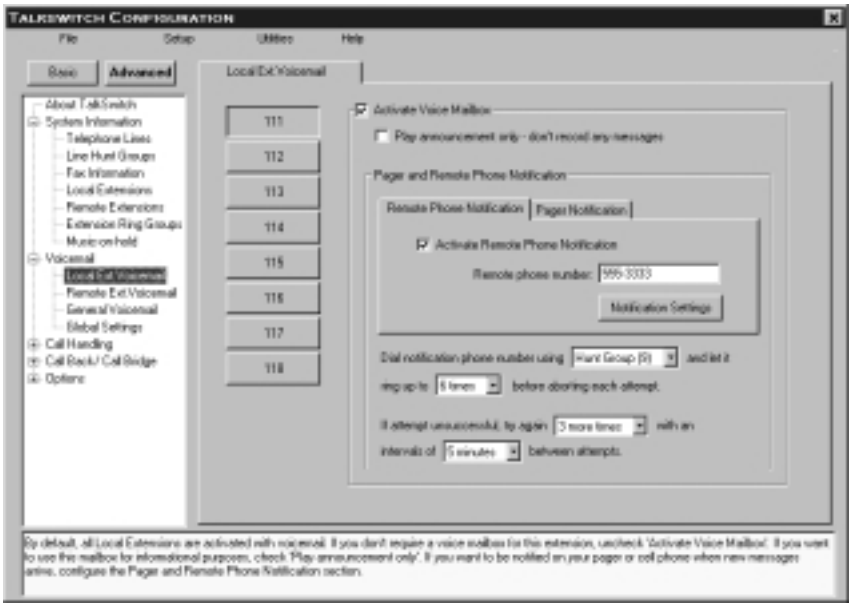
For more information on using Music-on-hold, please see section 3.5.

2.3.2 Voicemail

This section deals with the internal voicemail system included with TalkSwitch. It allows you to activate Local, Remote and General mailboxes and change global settings to the voicemail system. For details on how to use voicemail, see section 3.4.

2.3.2.1 Local Extension Voicemail

By default, all Local Extensions are activated with the associated voice mailbox. If you want to use this mailbox for informational purposes only and prevent callers from recording messages, then check the 'Play announcement only' box.



Remote Phone Notification:

If you want to be notified at another location when new messages arrive, you can use Remote Phone Notification. Simply enter the phone number of the cell phone or location where you want to be notified.

Notification Settings:

Detailed instructions are provided for how you may want TalkSwitch to handle notification calls being considered successful or requiring another attempt.

Pager Notification:

Use Pager Notification if you want to be notified by pager when new messages arrive. Simply activate the feature then enter the pager phone number and the numeric message to be displayed on the pager.

Dial notification phone number…

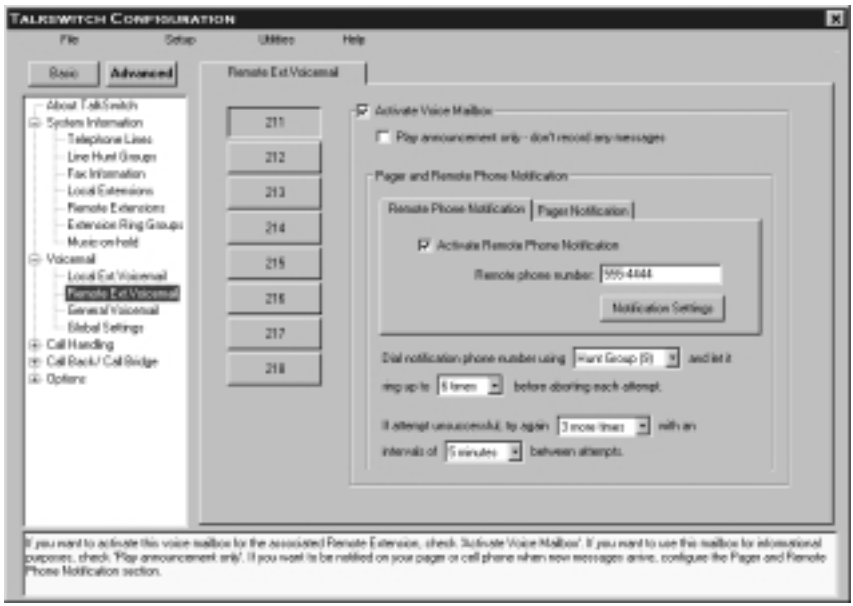
These parameters control which Hunt Group is used for both the Remote Phone and Pager Notification calls. It also allows you to adjust the number of rings before it will abort the attempt then follow the parameters listed in the next section.

If attempt unsuccessful…

These parameters control how many times TalkSwitch will try to notify the Remote Phone or Pager before it will abort the entire notification attempt. You can also specify the time interval between attempts.

2.3.2.2 Remote Extension Voicemail

Remote Extension voicemail is similar in features to the Local Extension voicemail. If you want to use this mailbox for informational purposes only and prevent callers from recording messages, then check the 'Play announcement only' box.



Remote Phone Notification:

If you want to be notified at another location when new messages arrive, you can use Remote Phone Notification. Simply enter the phone number of the cell phone or location where you want to be notified.

Notification Settings:

Detailed instructions are provided for how you may want TalkSwitch to handle notification calls being considered successful or requiring another attempt.

Pager Notification:

Use Pager Notification if you want to be notified by pager when new messages arrive. Simply activate the feature then enter the pager phone number and the numeric message to be displayed on the pager. See following page for screen shot of the pager notification options.

Dial notification phone number…

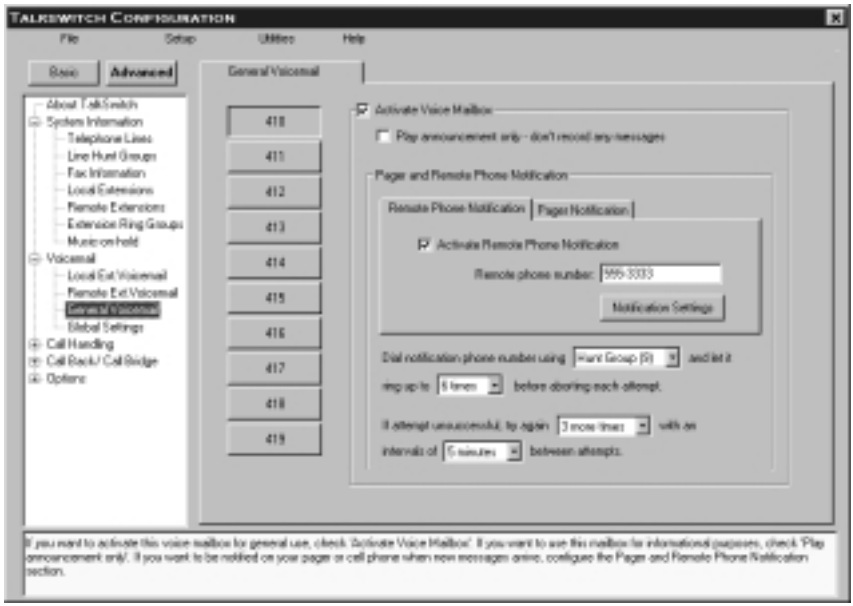
These parameters control which Hunt Group is used for both the Remote Phone and Pager Notification calls. It also allows you to adjust the number of rings before it will abort the attempt then follow the parameters listed in the next section.

If attempt unsuccessful…

These parameters control how many times TalkSwitch will try to notify the Remote Phone or Pager before it will abort the entire notification attempt. You can also specify the time interval between attempts.

2.3.2.3 General Voicemail

General Voicemail is similar in features to both Local and Remote Extension Voicemail. If you want to use this mailbox for informational purposes only and prevent callers from recording messages, then check the 'Play announcement only' box.



Remote Phone Notification:

If you want to be notified at another location when new messages arrive, you can use Remote Phone Notification. Simply enter the phone number of the cell phone or location where you want to be notified.

Notification Settings:

Detailed instructions are provided for how you may want TalkSwitch to handle notification calls being considered successful or requiring another attempt.

Pager Notification:

Use Pager Notification if you want to be notified by pager when new messages arrive. Simply activate the feature then enter the pager phone number and the numeric message to be displayed on the pager. See following page for screen shot of the pager notification options.

Dial notification phone number…

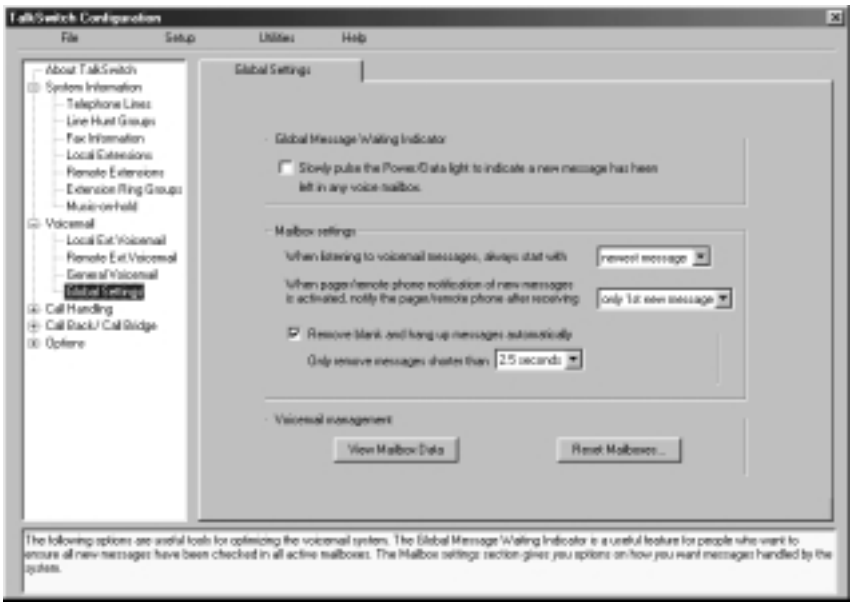
These parameters control which Hunt Group is used for both the Remote Phone and Pager Notification calls. It also allows you to adjust the number of rings before it will abort the attempt then follow the parameters listed in the next section.

If attempt unsuccessful…

These parameters control how many times TalkSwitch will try to notify the Remote Phone or Pager before it will abort the entire notification attempt. You can also specify the time interval between attempts.

2.3.2.4 Global Settings

Any changes made to Global Settings will affect all system voice mailboxes.


TalkSwitch Configuration
File
Setup
Utilities
Help
About TalkSwitch
System Information
Telephone Lines
Line Hunt Groups
Fax Information
Local Extensions
Remote Extensions
Extension Ring Groups
Music on Hold
Voicemail
Local Ext Voicemail
Remote Ext Voicemail
General Voicemail
Global Settings
Call Handling
Call Back / Call Bridge
Options
Global Settings
Global Message Waiting Indicator
Slowly pulse the Power/Data light to indicate a new message has been left in any voice mailbox.
Mailbox settings
When listening to voicemail messages, always start with
newest message
When pager/remote phone notification of new messages is activated, notify the pager/remote phone after receiving
only 1st new message
Remove blank and hang up messages automatically
Only remove messages shorter than
2.5 seconds
Voicemail management
View Mailbox Data
Reset Mailboxes...
The following options are useful tools for optimizing the voicemail system. The Global Message Waiting Indicator is a useful feature for people who want to ensure all new messages have been checked in all active mailboxes. The Mailbox settings section gives you options on how you want messages handled by the system.

Global Message Waiting Indicator:

This option can be useful if you only use one or a couple of voice mailboxes. Anytime a new message is left in any active voice mailbox, the Power/Data light will pulse very slowly to indicate that there is at least one new message in one of the mailboxes. Once all new messages have been heard, this light will return to the default state of being on solid.

Mailbox Settings:

The first option controls the order that messages are played back when listening to voicemail. The default setting plays messages back starting with

the newest message and working back to the oldest messages. This setting is convenient since many people store several saved messages and don't want to skip through these messages every time they want to listen to newer messages.

The 2nd control can be adjusted so that you can have the system page or call your remote phone for every new message received in voicemail or only the 1st new message received in voicemail.

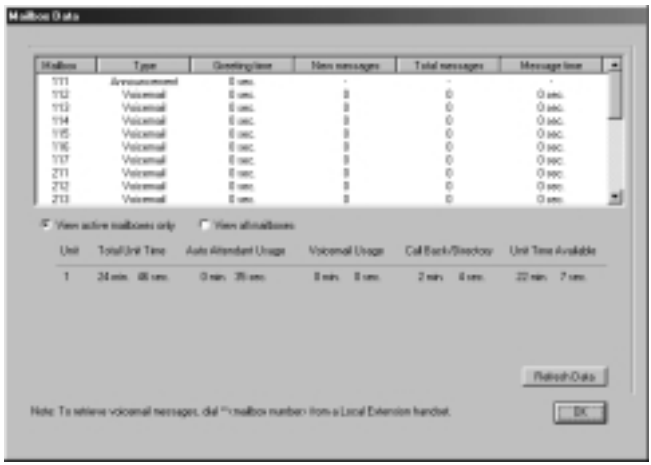
Automatically remove blank and short messages:

Enable this option if you tend to get several messages where callers hang up rather than leave messages. The advantage of not clearing the short messages is that employees can listen to the Caller ID information played at the end of the message to identify callers*.

*Caller ID service required from your telephone company.

View Mailbox Data:

Details are provided for each voice mailbox and announcement. This tool is useful for better managing the voicemail resources of the system.



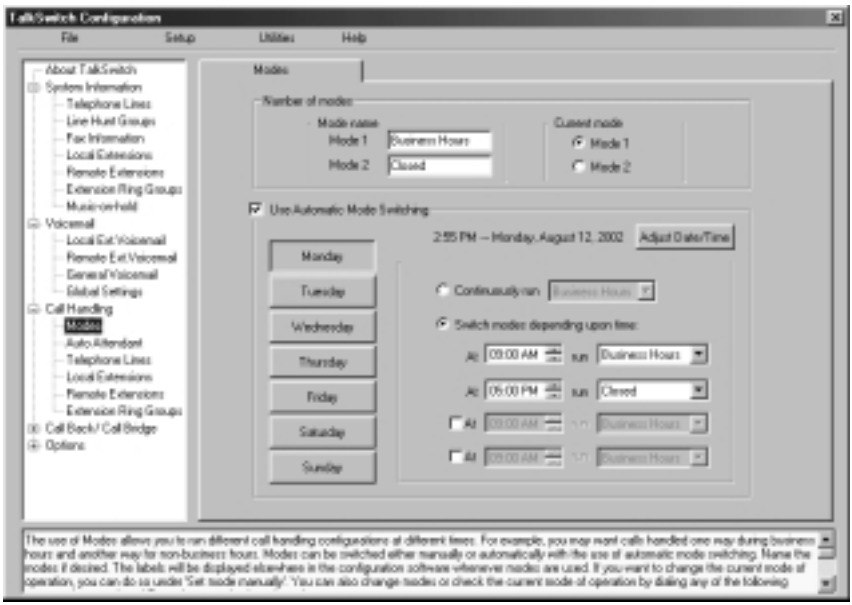
Reset Mailboxes:

Use this feature if for example an employee has left the company and all greetings, messages and settings for a particular mailbox need to be reset. If you need to simply delete a password, use the Voicemail Manager located under 'Utilities' in the menu bar.

2.3.3 Call Handling

2.3.3.1 Modes

The use of Modes allows you to run different call handling configurations at different times. For example, you may want calls handled one way during business hours and another way for non-business hours. Modes can be switched either manually or automatically with the use of Automatic Mode Switching.



Name the modes if desired. The labels will be displayed elsewhere in the configuration software whenever modes are used.

To use the Automatic Mode Switching feature, you must first activate it by clicking 'Use Automatic Mode Switching'. Next, set the start times for each mode. If you want TalkSwitch to change modes more than twice in one day, you can activate up to two extra mode changes for that day.

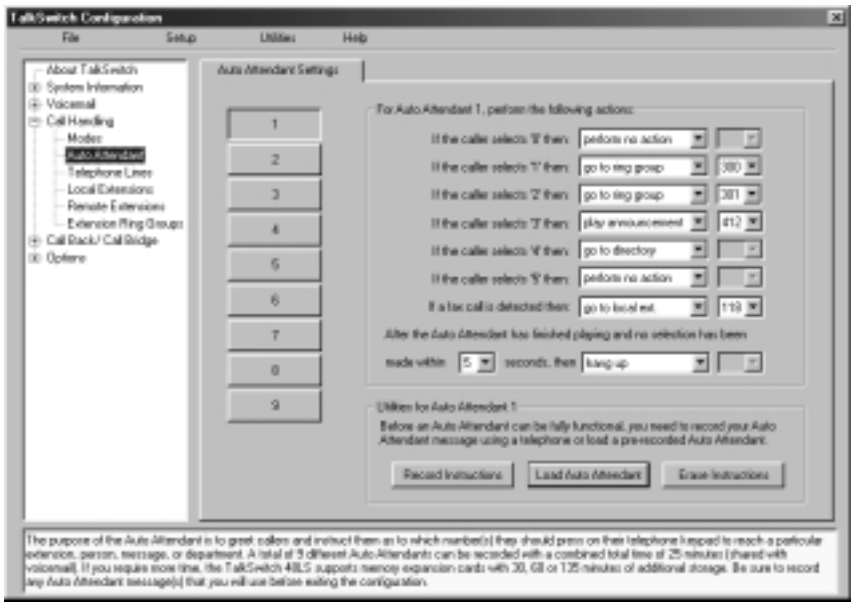
If you do not want to use Automatic Mode Switching, you can still switch modes manually in the software or through any telephone using touch tone commands. Enter command mode by dialing # then your password if required. Next, dial any of the following commands followed by # to confirm.

31	Changes TalkSwitch to mode 1
32	Changes TalkSwitch to mode 2
30	TalkSwitch tells you what mode it currently is using

2.3.3.2 Auto Attendant

The purpose of the Auto Attendant is to greet callers and instruct them as to which number(s) they should press on their telephone keypad to reach a particular extension, person, message, or department. Callers can also directly dial Local Extensions (1xx), Remote Extensions (2xx), Extension Ring Groups (300-309), Voicemail (both leave messages and access messages), access Call Back, access Call Bridge and enter Command mode for making changes to the system configuration.

A total of 9 different Auto Attendants can be recorded or loaded with a combined total time of 25 minutes (shared with voicemail, but can be expanded on the TalkSwitch 48 using TalkSwitch Memory cards). You do not have to use or record all 9 Auto Attendants.



When 2 or more units are networked, they share the same 9 Auto Attendants. When an Auto Attendant message is recorded on any TalkSwitch unit, it is automatically copied to all the other TalkSwitch units on the same LAN. This feature helps reduce network traffic and allows any system to continue functioning even if another unit loses power or is disconnected from the LAN.

The Auto Attendants can be recorded from any Local Extension or remotely using touch tone commands.

Recording Auto Attendant messages using touch tone commands:

Pick up any Local Extension or dial into TalkSwitch and at the Auto Attendant enter command mode by pressing #. If you have the Administrator password enabled, you need to enter this password. Next, begin entering the proper touch tone commands listed on the next page. After entering a command, you will need to press # to confirm the entry before entering another command or exiting command mode. To exit command mode, press * or hang up.

Auto Attendant	Record message	Playback message	Erase message
1	41	51	041
2	42	52	042
3	43	53	043
4	44	54	044
5	45	55	045
6	46	56	046
7	47	57	047
8	48	58	048
9	49	59	049

Example: Recording and playing back Auto Attendant

1. Press # to enter command mode, then dial 4 1 #.
2. After the tone, record your Auto Attendant message. Press # when you have finished.
3. Press 5 1 # to listen to your recording.

Note: If you have the Administrator password enabled, you will need to enter this password after you hit # the first time to enter command mode.

Recording Auto Attendants from an out-of-office phone:

1. Dial into TalkSwitch and wait for the Auto Attendant message.
2. Once the Auto Attendant is playing, use the same keypad commands as you would from a TalkSwitch extension (in the '*Recording Auto Attendants using touch tone commands:*' section). If you have Password Protection enabled, you will be prompted for your password.

In the "At the Auto Attendant, perform the following actions:" section:

For each Auto Attendant, you can configure how you want TalkSwitch to handle calls when a caller selects '0, 1, 2, 3, 4, 5', makes 'no selection' or if a 'fax call is detected'.

If the caller selects '0':

If the caller presses '0' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory.

If the caller selects '1':

If the caller presses '1' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory. You may wonder how a caller can press just '1' or dial extension '111' at the Auto Attendant and the system understand what it is supposed to do. TalkSwitch waits 1.5 seconds for another digit after receiving the first digit. If another digit is not received, then TalkSwitch will follow the action set for the digit '1'.

If the caller selects '2':

If the caller presses '2' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory. TalkSwitch waits 1.5 seconds for another digit after receiving the first digit. If another digit is not received, then TalkSwitch will follow the action set for the digit '2'.

If the caller selects '3':

If the caller presses '3' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory. TalkSwitch waits 1.5 seconds for another digit after receiving the first digit. If another digit is not received, then TalkSwitch will follow the action set for the digit '3'.

If the caller selects '4':

If the caller presses '4' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory.

If the caller selects '5':

If the caller presses '5' at the specified Auto Attendant, TalkSwitch can perform no action, or, route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or go to the Directory.

After the Auto Attendant has finished playing and no selection has been made within x seconds:

If no selection is detected at the specified Auto Attendant, TalkSwitch can route the call to any Local or Remote Extension, Ring Group, Voice mailbox, Auto Attendant, Announcement or simply hang up. This feature is included in case someone does not have a touch-tone phone or if it is a fax call where the calling fax machine does not emit a CNG tone. It can also be used to forward calls immediately after the Auto Attendant answers the call. You will notice that you can specify the length of time after the Auto Attendant has finished playing before it performs the 'no selection' action.

If a fax call is detected:

If TalkSwitch detects a fax call (by CNG detection), it has the ability to route it to a Local or Remote Extension or if you do not want to use fax detection, you can have TalkSwitch perform no action when detecting a fax call.

Fax calls are detected by what's called a CNG tone. If a fax machine sends this tone while trying to establish a connection to a fax machine connected to TalkSwitch, TalkSwitch will handle the call accordingly. Not all fax machines emit a CNG tone, and as a result TalkSwitch will not be able to detect the fax call and route it to the fax machine. To guarantee the reception of every fax, we recommend the use of a 'Distinctive Ring Number' added to one of your lines for fax calls. TalkSwitch can then handle every fax call consistently.

The digits 6, 7, 8 and 9 are not available as programmable options since they are used for other system features:

If 6 is dialed:

If you press '6' at the Auto Attendant, you will be able to configure and use Auto and Prompted Call Back. See section 2.3.4 for more details about configuring Call Back and section 3.7.2 for details on how to use Call Back.

If 7 is dialed:

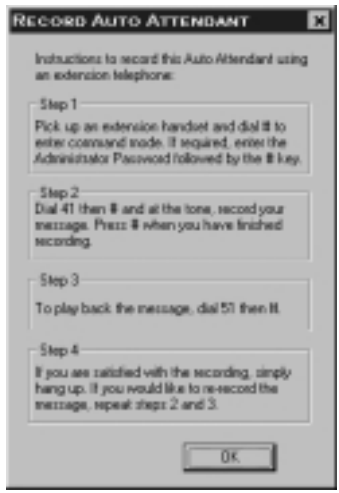
This digit is used to precede PBX extensions of another Centrex or PBX system. If TalkSwitch is not connected to another system, then you need not worry about this setting. If TalkSwitch is connected to a PBX system, then see section 2.3.5.4 for more details.

If 80 - 88, or 9 is dialed:

If you press '80 - 88 or 9' at the Auto Attendant, you will access Call Bridge if it has been permitted. See section 2.3.4.3 for more details on configuring Call Bridge and section 3.7.1 for details on how to use Call Bridge.

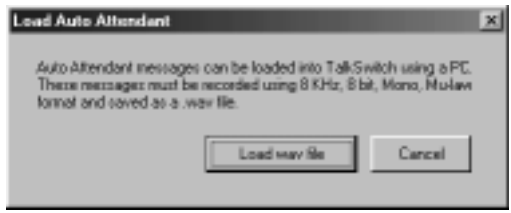
Record Instructions

Selecting this button displays a dialog box showing the instructions on how to record and playback an Auto Attendant using a telephone. No adjustments are required for the recording volume as TalkSwitch automatically adjusts the recording volume for optimal recordings. If you find that the playback of your Auto Attendant messages are too low, you can adjust the playback volume on the Audio Controls page located under 'Options'.


RECORD AUTO ATTENDANT
Instructions to record this Auto Attendant using an extension telephone:
Step 1
Pick up an extension handset and dial # to enter command mode. If required, enter the Administrator Password followed by the # key.
Step 2
Dial 41 then # and at the tone, record your message. Press # when you have finished recording.
Step 3
To playback the message, dial 51 then #.
Step 4
If you are satisfied with the recording, simply hang up. If you would like to re-record the message, repeat steps 2 and 3.
OK

Load Auto Attendant

Selecting this button displays a dialog box with instructions on how to load an Auto Attendant using a pre-recorded wav file. If you want to have Auto Attendants professionally recorded, make sure you specify that the files need to be 8KHz, 8bit, mono, and saved as a mu-law format wav file.


Load Auto Attendant
Auto Attendant messages can be loaded into TalkSwitch using a PC. These messages must be recorded using 8 KHz, 8 bit, Mono, Mu-law format and saved as a .wav file.
Load wav file
Cancel

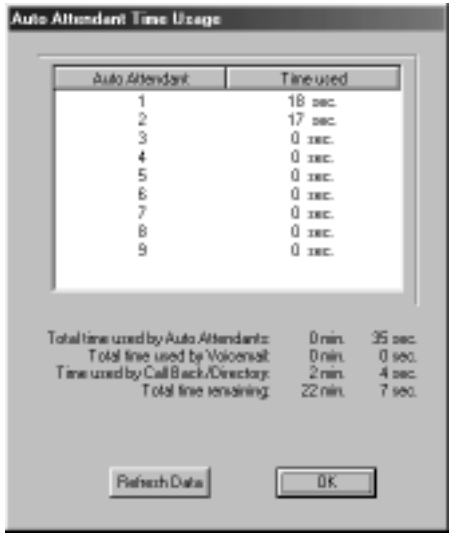
Erase Instructions

Selecting this button displays a dialog box showing the instructions on how to erase an Auto Attendant using a telephone. It is a good idea to erase any unused Auto Attendants since they share the same memory as voicemail.

ERASE AUTO ATTENDANT MESSAGE
Instructions to erase this Auto Attendant message using an extension telephone:
Step 1
Pick up an extension handset and dial # to enter command mode. If required, enter the Administrator Password followed by the # key.
Step 2
Dial 041 then #.
OK

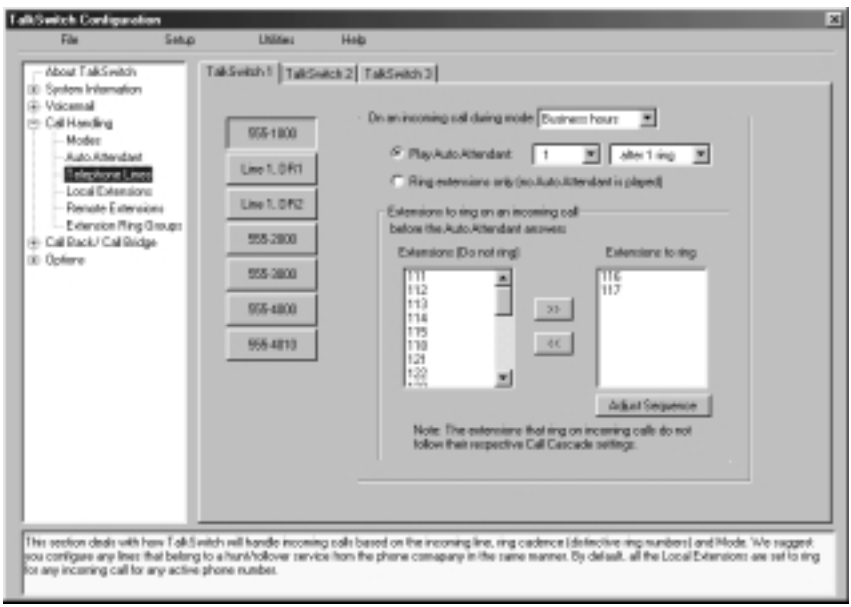
View Auto Attendant Memory Usage

Selecting this button displays the amount of time used by all of the Auto Attendants. This feature helps you keep track of memory usage as you may have unused Auto Attendant messages that can be deleted to free up more memory.


Auto Attendant Time Usage
Auto Attendant
Time used
1 18 sec.
2 17 sec.
3 0 sec.
4 0 sec.
5 0 sec.
6 0 sec.
7 0 sec.
8 0 sec.
9 0 sec.
Total time used by Auto Attendants: 0 min. 35 sec.
Total time used by Voicemail: 0 min. 0 sec.
Time used by Call Back/Directory: 2 min. 4 sec.
Total time remaining: 22 min. 7 sec.
Refresh Data
OK

2.3.3.3 Telephone Lines

This section deals with how TalkSwitch will handle incoming calls based on the incoming line and ring cadence (distinctive ring numbers).



First select a line to configure then the appropriate mode you want TalkSwitch to use these settings. If you entered the phone number in the Telephone Lines section under System Information, then the number will appear on the corresponding button.

Play Auto Attendant:

If you wish to have the Auto Attendant answer calls to give callers options, select the appropriate Auto Attendant and number of rings before the Auto Attendant answers . The caller will always hear one more ring than the number of rings you select since TalkSwitch uses the first ring to determine the ring type and support Caller ID information.

Ring extensions only (no Auto Attendant is played):

If you don't want the Auto Attendant to answer calls on this line, then select this option. By default all the Local Extensions are set to ring immediately during an inbound call. If you select this option, no Call Cascade actions can be performed. If you require a 'fall through' sequence such as going to a voice mailbox, you can configure this line to have an Auto Attendant answer after X rings then perform an action configured for that Auto Attendant.

If you call in on any line, TalkSwitch will answer after 15 rings with a generic Auto Attendant so that you can still access the system to make configuration changes, change modes, access voicemail, or dial extensions.

Voicemail example:

You don't want an Auto Attendant to answer, but calls to simply go to a particular voice mailbox.

Solution: Set Auto Attendant 9 to answer calls after 'x' number of rings, and select the extensions you want to ring before the Auto Attendant answers. Next, configure Auto Attendant 9 as follows:

1) Make sure nothing has been recorded for Auto Attendant 9. At internal dial tone, you can dial < # + (password if required) 049# > to ensure nothing is there.

2) Configure the 'If no selection is made after 'x' seconds' option to go to the voice mailbox you desire and select '0 seconds' for the timing.

Now when callers call in and you don't answer within the number of rings programmed, the call will be answered by Auto Attendant 9. Since nothing has been recorded, the call will immediately go to the specified voice mailbox. Be as creative as you like!

(See the previous section for details on configuring Auto Attendants)

The next section controls how the extensions will ring before the Auto Attendant answers the call.

- If you have chosen the Auto Attendant to answer calls immediately, this section does not require configuration and will be greyed out.
- If the Auto Attendant is set to answer after 1 or more rings, then you can configure when specific extensions will ring before the Auto Attendant answers.
- If no Auto Attendant is chosen to answer on the specified line, then you can configure when specific extensions will ring (up to 9 rings).

Extensions to ring on an incoming call (before Auto Attendant answers):

Select the Local Extensions you would like to ring before the Auto Attendant answers. By default, all activated Local Extensions will ring. If you require certain extensions to ring in a sequence, i.e. one extension rings first, then another on the 2nd ring, click the "Adjust Sequence" button to configure.

Remember: Callers will only be directed according to settings for an Auto Attendant first. Calls will not follow the Call Cascade settings of any of the Local Extensions programmed to ring before the Auto Attendant answers.

Adjust Sequence:

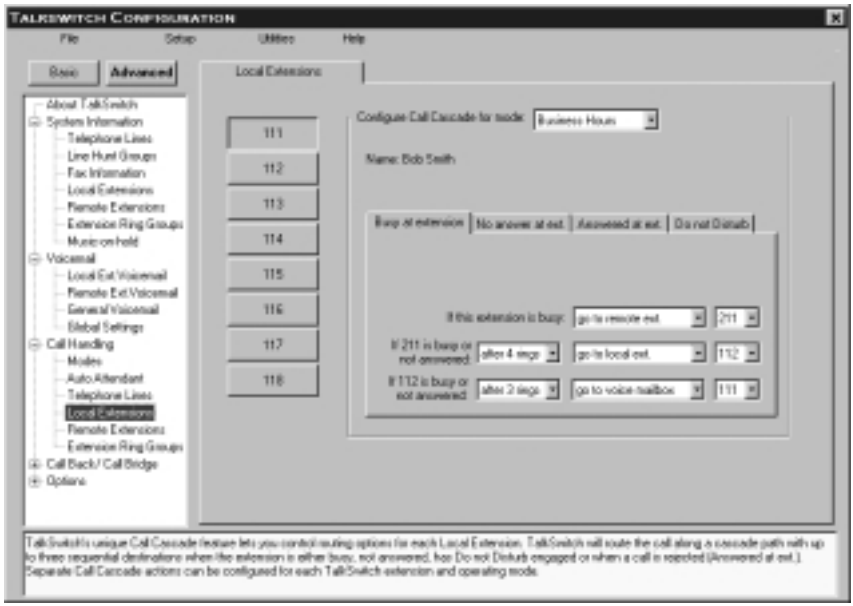
This section controls how the extensions will ring before the Auto Attendant answers the call.

- If you have chosen the Auto Attendant to answer calls immediately, this section does not require configuration and will be greyed out.
- If the Auto Attendant is set to answer after 1 or more rings, you can then configure when specific extensions will ring before the Auto Attendant answers.
- If no Auto Attendant is chosen to answer on the specified line, then you can configure when specific extensions will ring up to 9 rings. Remember that no calls will go to voicemail unless you first have an Auto Attendant answer.

2.3.3.4 Local Extensions - Call Cascade

This section configures the incoming Call Cascade options for the Local Extensions. The Call Cascade routing options are only engaged if the extension is chosen from the Auto Attendant or if a call is manually transferred to the extension. Once a call enters an extension's Call Cascade sequence, the extension "owns" the call. It will not follow any other extension's options even if chosen in the Cascade sequence - what you see in an extension's Cascade sequence is exactly what you will get. You can set up the Call Cascade sequences differently for both scheduling modes (the scheduling for these modes are set up on the Modes tab).

Even if a call is manually transferred to a Local Extension and that extension is busy, TalkSwitch will follow the Call Cascade options for that extension.



For Local Extensions, there are 4 different 'Call Cascade' situations; Busy at extension, No answer at extension, Answer at extension(routing when a call is rejected) and Do not Disturb (when turned on at an extension). For each of these situations, you can control how and where you want the incoming call to the extension handled with up to 3 'cascade' destinations available.

1. Busy at extension - *routing options when this extension is busy*

   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant, play busy tone (for example: used if a fax machine is at the extension), queue caller, or hang up. For more information on these features, see chapter 3.0 - Using TalkSwitch.

2. No answer at ext. - *routing options when this extension does not answer after a specified number of rings.*

   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant or keep ringing.

3. Answered at ext. - *routing options when this extension 'rejects' a screened call.*

   Selecting 'play caller's name first' will prompt callers, when they choose this extension at the Auto Attendant, to record their name. When you answer the call at the extension, it will announce the caller (by playing their recording), at which time you can choose to accept the call by pressing # or reroute the call to the Cascade options on this tab by either hanging up or pressing *. Routing options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant or hang up. In the case where 'hang up' is selected, TalkSwitch will first play the following prompt before hanging up: "I'm sorry, that extension is unavailable at this time. Please try again later."

4. Do not Disturb - *routing options when this extension has engaged the 'Do not Disturb' feature*

   The Do not Disturb feature is toggled on or off by dialing *62 from a Local Extension handset. Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant or hang up. When Do not Disturb is enabled, you will hear "Do not disturb on" before the dialtone as a reminder since no calls will ring through to your extension. You may still dial any digits during this prompt.

In the Cascade sequence, only choosing an extension (Local, Remote or Ring Group) will allow you to choose an option in the next line. Any other selection is considered an end-of-call option. Note as well that the last line in the Cascade sequence only allows the choice of an 'end-of-call' option. This is done so the chance of a caller being "looped" within the system is removed.

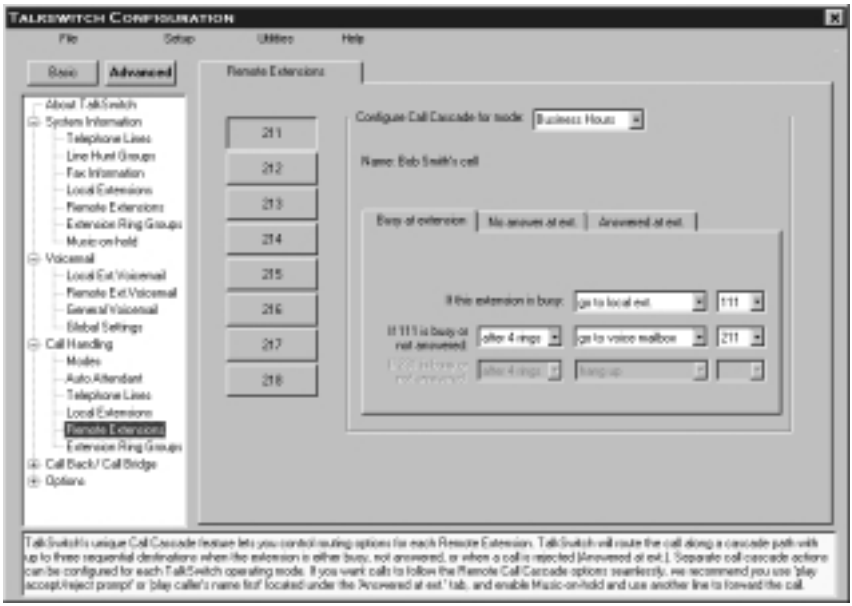
Adding selections to a Call Cascade that are not yet configured:

If while configuring the Cascade sequence you require a Local Extension, Remote Extension, Ring Group, Voice mailbox or Announcement that has not been activated as yet, you can easily add the required selection by choosing 'new'. If chosen, a screen will appear (depending upon which type is chosen). Simply fill in the required information to add the new option to the selectable list.

The information given in the 'Add new...' screens will be reflected within their respective sections. For example, if you add a new Remote Extension (let's say 211), when you go to the Remote Extensions section you will see that extension 211 has the information previously filled in the 'Add new Remote Extension' screen. You will also note that not all the information displayed in the extension tabs are available in the 'Add new...' screens. This is because only the information that effects the original extension's Call Cascade functionality is offered.

2.3.3.5 Remote Extensions - Call Cascade

This section allows you to configure the incoming Call Cascade options for the Remote Extensions. The Call Cascade routing options are only engaged if the extension is chosen from the Auto Attendant or if a call is manually transferred to the extension. Once a call enters an extension's Call Cascade sequence, the extension ''owns'' the call. It will not follow any other extension's options even if chosen in the Call Cascade sequence - what you see in an extension's Call Cascade sequence is exactly what you will get. You can set up the Call Cascade sequences for both modes (the scheduling for these modes are set up in the Modes tab).



For Remote Extensions, there are 3 different 'Call Cascade' options. For each of these options, you can control how and where you want the incoming call to the extension handled with up to 3 'cascade' destinations available.

1. Busy at extension - *routing options when this extension is busy*
   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant, play busy tone or hang up. If voicemail or a phone company prompt answers calls when your cell phone is busy, you may want to consider using the 'Play accept/reject prompt' option under the Answered at ext. tab.

2. No answer at ext. - *routing options when this extension does not answer after a specified number of rings.*

   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement or Auto Attendant, keep ringing or hang up. If you have cell phone voicemail or a phone company message that answers after a specified number of rings, and you want the calls redirected to TalkSwitch voicemail, please ensure you set the number of rings for this extension to a number less than the cell phone company voicemail or system prompt.

3. Answered at ext. - *routing options when this extension 'rejects' a call.*

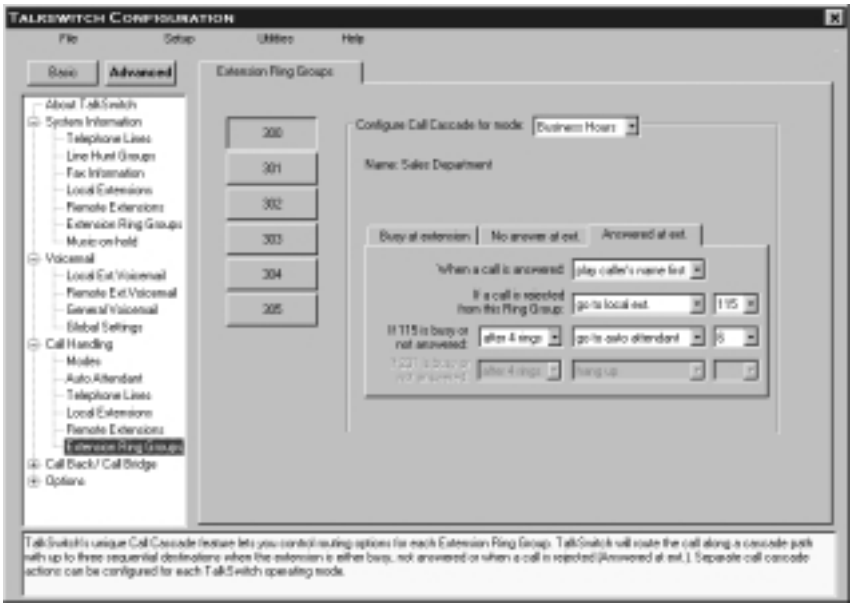
   With Remote Extensions you have the choice between two different Call Screening methods, 'play accept/reject prompt' and 'play caller's name first'. 'Stay connected' is the default setting which means that as soon as the remote phone number is dialed, the call is connected. Selecting 'play accept/reject prompt' will prompt the Remote Extension when answered by stating "This is call forward". Selecting 'play caller's name first' will prompt callers to announce their name. When you answer the call at the extension, it will announce the caller (by playing the recorded name). After hearing either message, the Remote Extension can choose to accept the call by pressing # or reroute the call to the Call Cascade options on this tab by either hanging up or pressing *. Routing options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant or hang up.

   If you select 'stay connected' you will notice that the Call Cascade options are greyed out. TalkSwitch can only control forwarded calls when prompting is enabled. Also, if you use one of the prompted methods for this Remote Extension, have Music-on-hold enabled, and are not using 3-way calling to forward calls to this Remote Extension, the Call Cascade will be seamless to the caller as they will only hear music throughout the entire process of trying to locate you.

If a call is forwarded to a Remote Extension from a Call Cascade sequence and has either 'play caller's name first' or 'play accept/reject prompt' enabled, the Remote Extension will hear "This is Call Cascade..." instead of "This is Call Forward...". This is done so that you know when the call is rejected, it will send the caller to the next Call Cascade option of the extension that forwarded the call and not follow the Remote Extension's 'Answer at ext.' Call Cascade options.

2.3.3.6 Extension Ring Groups - Call Cascade

The following section configures the incoming call routing options for Ring Groups. The Call Cascade routing options are only engaged if the Ring Group has been chosen from the Auto Attendant or if a call has been manually transferred to the Ring Group. Once a call enters a Ring Group's Call Cascade sequence, the Ring Group "owns" the call. It will not follow any other extensions options even if chosen in the Call Cascade sequence - what you see in a Ring Group's Call Cascade sequence is exactly what you'll get.



For Ring Groups, there are 3 different Call Cascade options. For each of these options, you can control how and where you want the incoming call handled with up to 3 'cascade' destinations available. You can set up the Call Cascade sequences for both Modes (the scheduling for these modes are set up on the Modes tab).

1. Busy at extension - *routing options when all the extensions in the Ring Group are busy*

   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant, play busy tone, queue caller or hang up.

2. No answer at ext. - *routing options when all the extensions in the Ring Group do not answer after a specified number of rings.*

   Cascade options include forwarding calls to a Local Extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant, keep ringing or hang up.

3. Answer at ext. - *routing options when any of the extensions in the Ring Group 'rejects' a screened call.*

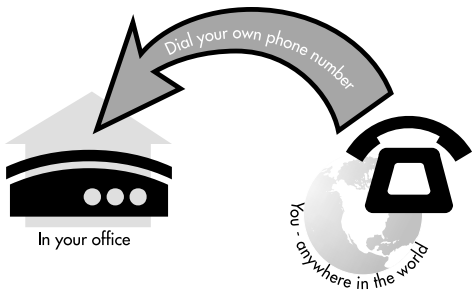
   Selecting 'play caller's name first' will prompt callers (when they choose this Ring Group at the Auto Attendant) to record their name. When you answer the call at a Ring Group extension, it will announce the caller (by playing their recording), at which time you can choose to accept the call by pressing # or reroute the call to the Cascade options on this tab by either hanging up or pressing *. Routing options include forwarding calls to a Local extension, Remote Extension, Extension Ring Group, built in Voicemail, Announcement, Auto Attendant or hang up.

2.3.4 Call Back / Call Bridge

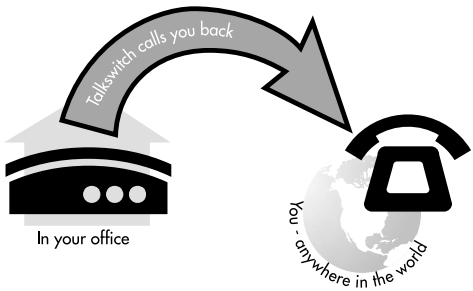
Working together, Call Back and Call Bridge act as your personal long distance operator. Whether you are across town or around the world, you can place calls from your home/office telephone line(s) accessing your long distance savings plan. Call Bridge allows you to place calls from your office telephone lines when you are not in the office. You can make a direct call to TalkSwitch, activate Call Bridge and enter the telephone number you want to dial. TalkSwitch dials the number from your home/office telephone lines and connects the two calls together (the call you made to TalkSwitch and the call TalkSwitch made from your home/office to the dialed party).

Here is how it works:

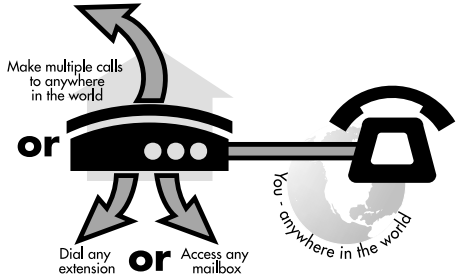
Step 1: Call your TalkSwitch telephone number to activate Call Back, then hang up.



Step 2: TalkSwitch calls you back within 10 seconds. You answer and accept Call Back. Your Auto Attendant will play or if you have none recorded, the TalkSwitch message will play.



Step 3: You can now access any TalkSwitch extension, voice mailbox or use Call Bridge to make calls around the globe just as if you were sitting in your own office.



There are two ways to activate Call Back:

1. *Auto Call Back* - Auto Call Back is immediate and eliminates the initial long distance call charge required to activate Call Back. When using Auto Call Back, all the Call Back settings must be pre-configured before Call Back is activated. To use Auto Call Back activation, simply dial your home/office telephone number, let the call ring twice and then hang up. Call Back is instantly activated!

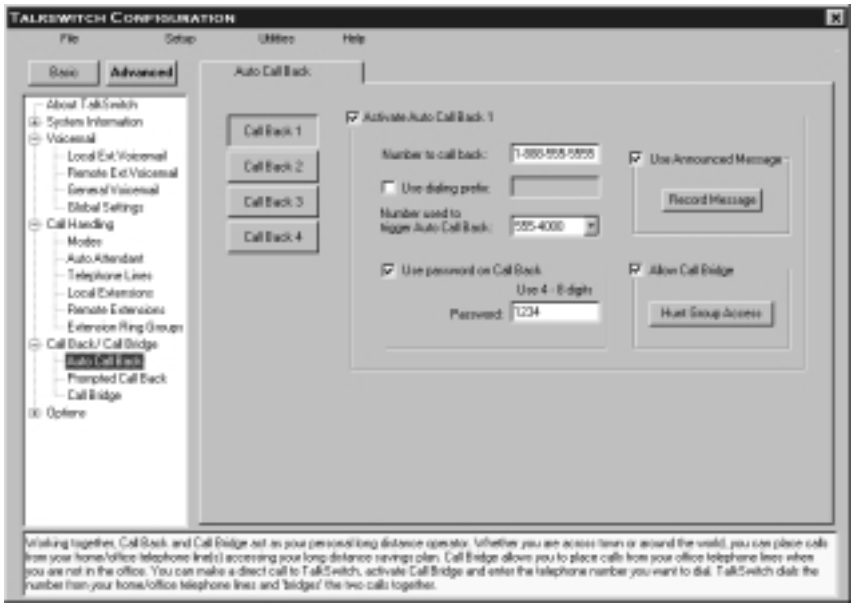
2. *Prompted Call Back* - Prompted Call Back offers the convenience of entering or changing your Call Back telephone number and message each time Call Back is activated. To use Prompted Call Back activation, simply dial your home/office telephone number. When the Auto Attendant answers your call, you dial '6' to access the Call Back settings through a series of prompts which allow you to:
    a) Enter the telephone number where you would like TalkSwitch to call you.
    b) Record an 'Announced' message if required. Call Back will be activated right after you initiate Prompted Call Back and hang up. It is important to remember that a small initial long distance charge will be incurred at your current location when activating Prompted Call Back.

By default, Prompted Call Back is not activated in the TalkSwitch configuration. You will need to activate Prompted Call Back before you can use this feature.

The call back out of the system to the number programmed always uses the same line that was dialed.

2.3.4.1 Auto Call Back

There are 4 Auto Call Back numbers that can be configured. Choose an Auto Call Back to configure and then activate it.



Number to call back:

Enter the Call Back number. This phone number should be entered exactly as you would normally have to dial the number from this line (i.e. do not enter a Line Hunt Group in the dialing string).

Use dialing prefix:

If you usually have to dial the same prefix when using Auto Call Back (for example a long distance calling card number), you may want to enable 'Use dialing prefix with Call Back number'. Enter the dialing prefix including any required pauses or feature keys such as * or #. The corresponding key for inserting a 2-second pause is the comma. For example, if you want to disable Call Waiting and want to dial a long distance prefix before dialing the long distance number you could enter the following:

> *70,1010555,, This corresponds to *70 for disabling the Call Waiting feature, a 2 second pause to wait for the new dialtone, then 1010555 for the long distance prefix, and a 4 second pause to wait for the new dialtone before dialing the actual long distance phone number.

In essence this saves you the hassle of having to always enter the same prefix every time you want to set up an Auto Call Back phone number.

Number used to trigger Auto Call Back:

Select the line/phone number when out of the office that you will be dialing to trigger this Auto Call Back. TalkSwitch will initiate the Call Back using the same line you initially called. You can make configuration changes to this Auto Call Back by dialing into this phone number only.

Use Password on Call Back:

This option is designed to give you security and to restrict who can use this particular Call Back number. Simply fill in a 4 to 8 digit password for the Call Back. When TalkSwitch calls you back, you will be prompted to input the password to accept Call Back to access Call Bridge or any TalkSwitch extension.

Use Announced Message:

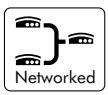
This option is recommended if the number TalkSwitch will be calling back corresponds to a hotel or a location where somebody else will be answering the call. The Announced Message option allows you to record a message that will be played when the call is initially answered during a Call Back. For example, you may want to say "Please transfer this call to Bob in room 307". When the hotel receptionist gets the Call Back and hears this message, they will know to transfer the call to your room.

The Announced Message can be recorded using an extension handset or remotely when you access Call Back from the Auto Attendant. The Record message button gives the instructions to record the message. They are as follows:

Pick up a telephone handset connected to the TalkSwitch and use the following keypad commands to record the specific Auto Call Back Announced Message:

1) Press # to enter command mode. If required, enter the password.
2) Next, enter the appropriate command as listed below. After each command, press # to confirm the entry.

Auto Call Back	Recording	Playback
1	61	71
2	62	72
3	63	73
4	64	74



There are 4 Auto Call Back accounts per TalkSwitch. If you need to record an Announced Message for a particular Auto Call Back account, this needs to be done on the same TalkSwitch unit as the account.

If you need to configure and/or record an Announced Message from a remote location and do not have the Auto Attendant set to answer this Call Back line, you can call your Call Back number and let it ring 15 times. A generic Auto Attendant will answer and you can configure Call Back by pressing 6.

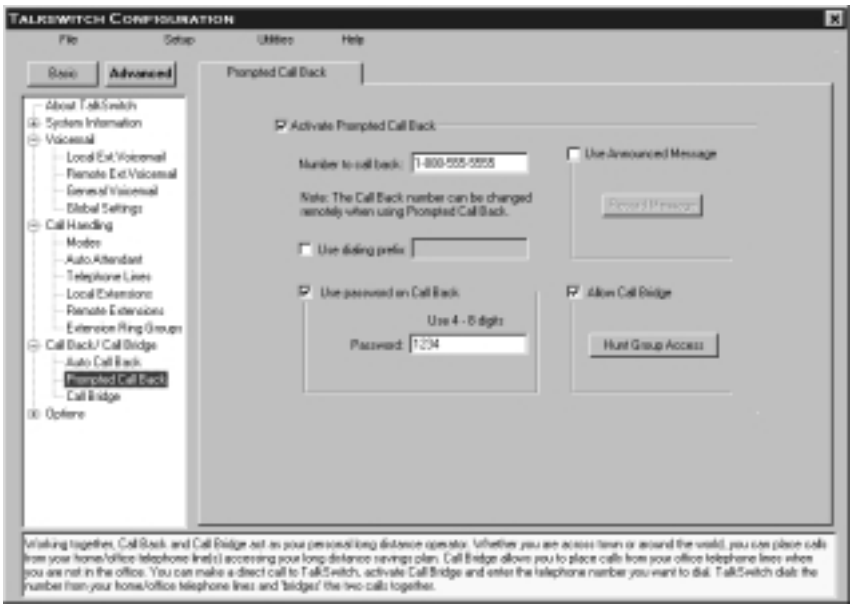
Allow Call Bridge:

To allow Call Bridge after a Call Back has been accepted, check the Allow Call Bridge box. You may also restrict the Hunt Group access using Call Bridge from this Call Back by choosing the Hunt Group Access button. By default, Call Bridge is enabled when Call Back is activated. You will not be prompted for another password when you choose a Hunt Group at the Auto Attendant.

When entering a Call Back phone number using a telephone, you can enter special characters using a special prefix. The default prefix is the * key. To enter a * in a dialing string you will need to dial **, for a 2 second pause dial *0, and for a #, dial *#. When you have completed the entire dial string you need to dial #.

2.3.4.2 Prompted Call Back

If you are travelling to a location where you do not yet know the phone number, you can use Prompted Call Back to save on your long distance charges. For details on using Call Back, see section 3.7.2.



Number to call back:

This phone number should be entered exactly as you would normally have to dial the number from this line (do not enter a Line Hunt Group in the dialing string). TalkSwitch will Call Back out on the same line the call originated.

When you access Prompted Call Back from out of the office, you may change this number before initiating Prompted Call Back. This is the benefit of Prompted Call Back - you do not need to preset the number before you leave the office.

Use dialing prefix with Call Back number:

If you usually have to dial the same prefix when using Prompted Call Back (for example a long distance calling card number), you may want to enable 'Use dialing prefix with Call Back number'. Enter the dialing prefix including any required pauses or feature keys such as * or #. The corresponding key for inserting a 2-second pause is the comma. For example, if you want to disable Call Waiting and want to dial a long distance prefix before dialing the long distance number you could enter the following:

> *70,1010555,, This corresponds to *70 for disabling the Call Waiting feature, a 2 second pause to wait for the new dialtone, then 1010555 for the long distance prefix, and a 4 second pause to wait for the new dialtone before dialing the actual long distance phone number.

In essence this saves you the hassle of having to always enter the same prefix every time you want to set up a Prompted Call Back phone number.

When entering a Call Back phone number using a telephone, you can enter special characters using a special prefix. The default prefix is the * key. To enter a * in a dialing string you will need to dial **, for a 2 second pause dial *0, and for a #, dial *#. When you have completed the entire dial string you need to dial #.

Use password on Call Back:

This option is designed to give you security and to restrict who can use Prompted Call Back. Simply fill in a 4 to 8 digit password and when TalkSwitch calls you back, you will be prompted to input the password to accept Call Back to access Call Bridge or any TalkSwitch extension.

Use Announced message:

As was described in the Auto Call Back section, this option is recommended if the number TalkSwitch will be calling back corresponds to a hotel or a location where somebody else will be answering the call. The Announced message option allows you to record a message that will be played when the call is initially answered during a Call Back. For example, you may want to say "Please transfer this call to Bob in room 307". When the hotel receptionist gets the call and hears this message, they will know to transfer the call to Bob's room.

The Announced Message can be recorded using an extension handset or remotely when you access Call Back from the Auto Attendant. The Record message button gives the instructions to record the message. They are as follows:

Pick up a telephone handset connected to the TalkSwitch and use the following keypad commands to record the Prompted Call Back Announced Message:

1) Press # to enter command mode. If required, enter the password.
2) Next, enter the appropriate command as listed below. After each command, press # to confirm the entry.

To record message: 65

To playback message: 75

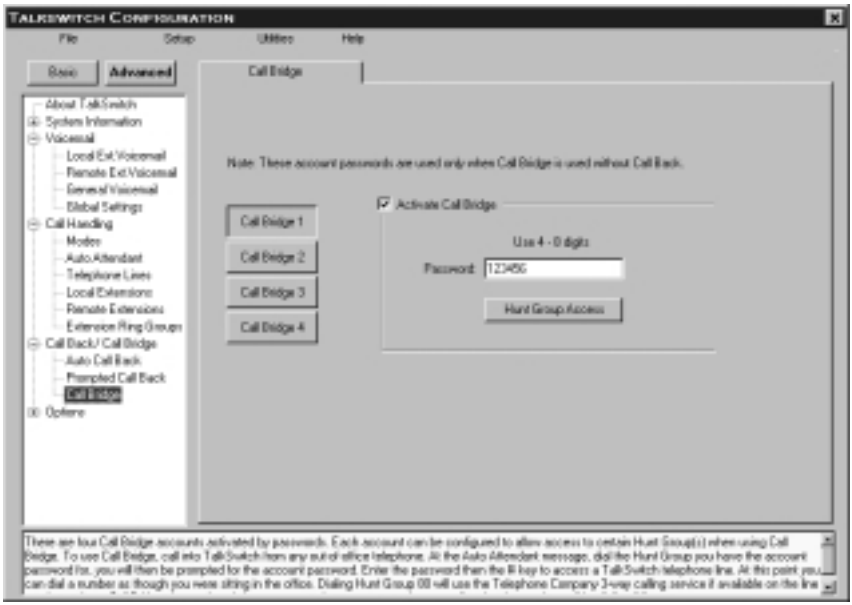
Allow Call Bridge:

To allow Call Bridge after a Call Back has been accepted, check the Allow Call Bridge box. You may also restrict the Hunt Group access using Call Bridge from this Call Back by choosing the Hunt Group Access button.

The call back number shown will always be the last number TalkSwitch dialed in the last Prompted Call Back session.

2.3.4.3 Call Bridge

Call Bridge is a useful feature for saving money while using Call Back or on it's own to avoid inflated long distance rates such as with cell phones.



How to use Call Bridge:

1. Call into TalkSwitch from any out-of-office telephone.
2. At the Auto Attendant message, dial the Hunt Group you know you have the account password for, (let's say it's 9 - the default) you will then be prompted for the account password.
3. You dial the password and then the # key to access a TalkSwitch telephone line.
4. At this point you can dial a number as though you were sitting in the office.

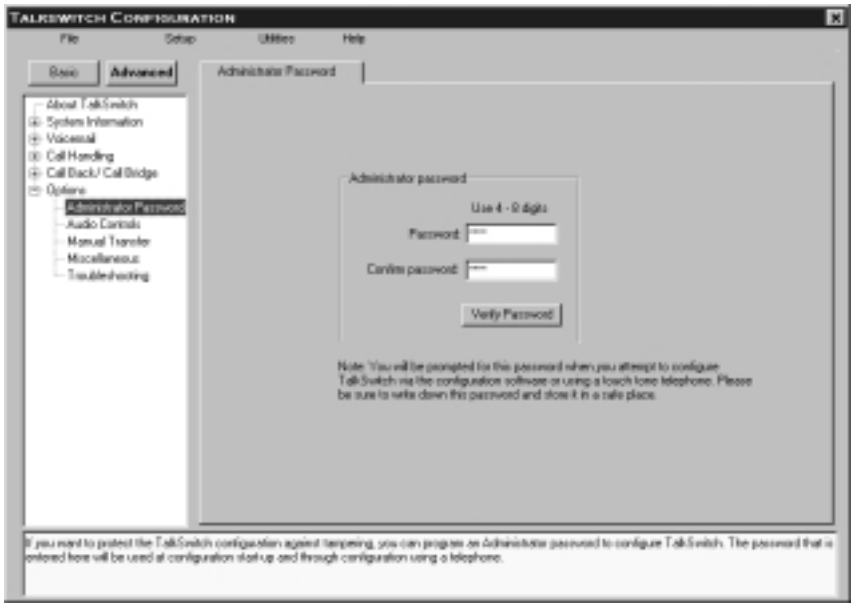
There are four Call Bridge accounts activated by passwords. Each account can be configured to allow access to certain Hunt Group(s) when using Call Bridge. To activate an account, check the 'Activate Call Bridge' box and fill in a 4 to 8 digit password. Next, select 'Hunt Group Access' and assign the Hunt Groups you want to make available for this account.

Call Bridge account passwords are only valid when using Call Bridge by itself, not when used in conjunction with Call Back.

2.3.5 Options

2.3.5.1 Administrator Password

This tab allows you to set up the Administrator password for TalkSwitch. The Administrator password gives access to all configuration options. The password that is entered here will be used at configuration start-up and through DTMF configuration.



Administrator password:

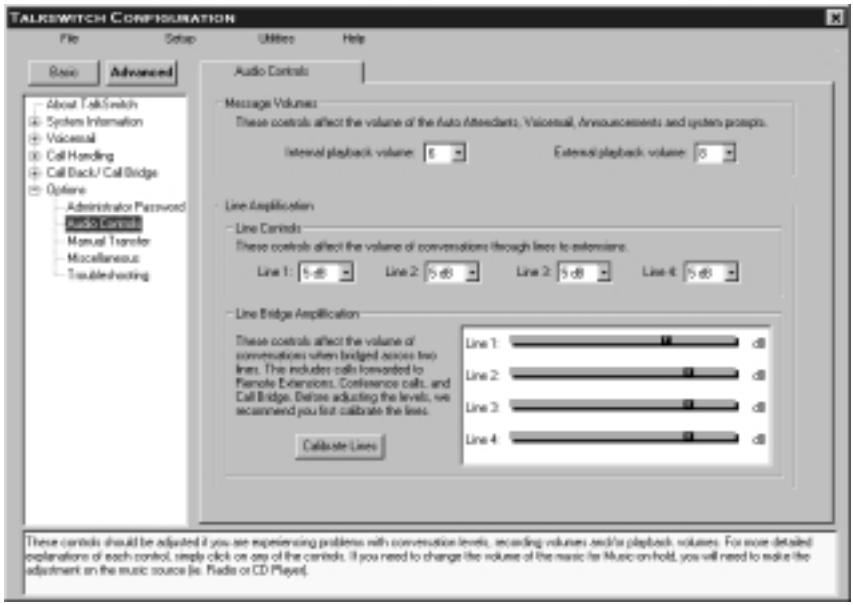
To activate the use of an administrator password, enter a 4 to 8 digit password and then confirm the password. Next, click the 'Verify Password' button to have the software validate the password. The password can only contain numbers since it is also used to gain access to the system using a touch tone phone.

If there is a problem with the password, you will need to re-enter the password and then confirm it. If you do not want a password or want to delete the existing password, simply clear the password field and click 'Verify Password'. TalkSwitch will no longer require a password for configuration.

If the administrator forgets their password, the only option to gain access to the configuration settings is to contact Centrepoint Technologies.

2.3.5.2 Audio Controls

This section deals with the adjustment of volume and system gain controls. All the controls on this page update TalkSwitch in *'real time'*. This allows you to adjust levels during a conversation without having to first save the configuration to TalkSwitch.


TALKSWITCH CONFIGURATION
File
Setup
Utilities
Help
Basic
Advanced
Audio Controls
About TalkSwitch
System Information
Voicemail
Call Handling
Call Back / Call Bridge
Options
Administrator Password
Audio Controls
Manual Transfer
Miscellaneous
Troubleshooting
Message Volumes
These controls affect the volume of the Auto Attendants, Voicemail, Announcements and system prompts.
Internal playback volume:
External playback volume:
Line Amplification
Line Controls
These controls affect the volume of conversations through lines to extensions.
Line 1:
Line 2:
Line 3:
Line 4:
Line Bridge Amplification
These controls affect the volume of conversations when bridged across two lines. This includes calls forwarded to Remote Extensions, Conference calls, and Call Bridge. Before adjusting the levels, we recommend you first calibrate the lines.
Calibrate Lines
Line 1:
Line 2:
Line 3:
Line 4:
dB
These controls should be adjusted if you are experiencing problems with conversation levels, recording volumes and/or playback volumes. For more detailed explanations of each control, simply click on any of the controls. If you need to change the volume of the music for Music on hold, you will need to make the adjustment on the music source (ie. Radio or CD Player).

Message Volumes:

If you need to increase or decrease the playback volume of the system prompts and recordings, you can use both the Internal and External volume controls on this page. Internal refers to prompts and messages heard at the Local Extensions, and External refers to prompts and messages heard from an outside line.

Line Amplification:

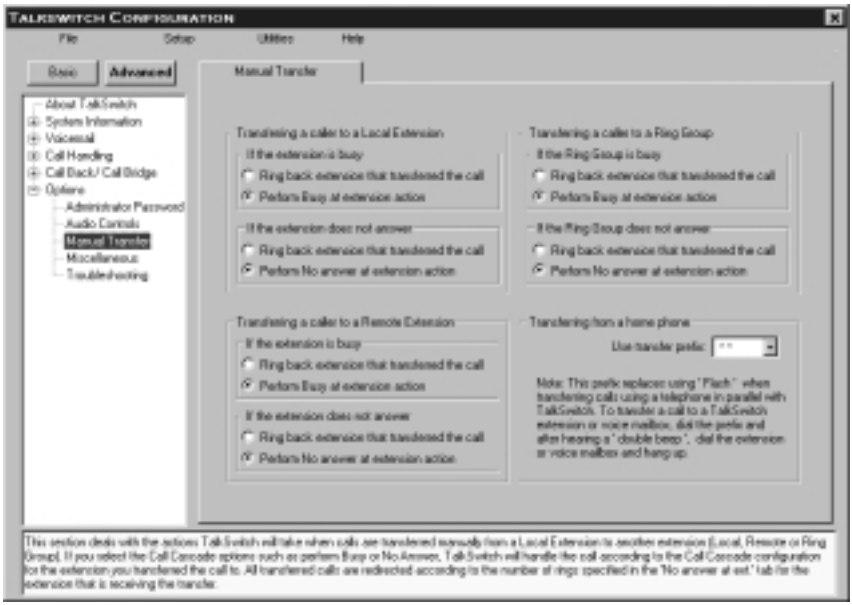
If you need to increase or decrease the volume of conversations through the system, you can adjust the gain for each line individually. By default, the settings compensate for any loss created by TalkSwitch and a portion of the loss created by your lines. If you have problematic lines or high loss lines, you may need to further increase the gain for each line. We recommend that you adjust the gain for each line separately as the characteristics of each line may vary.

Line Bridge Amplification:

This section deals with the volume of conversations when bridged across two lines. This includes calls forwarded to Remote Extensions, Conferenced calls, and Call Bridge. Before you use these features, we recommend that you first calibrate your lines. If you need to make adjustments after the calibration, you should adjust the levels during a 'forwarded' or 'bridged' conversation to ensure that calls do not become distorted or sound unnatural.

2.3.5.3 Manual Transfer

This section deals with actions TalkSwitch makes when calls are transferred manually.


TalkSwitch Configuration
File
Setup
Utilities
Help
Basic
Advanced
Manual Transfer
About TalkSwitch
System Information
Voicemail
Call Handling
Call Back / Call Bridge
Options
Administrator Password
Audio Controls
Manual Transfer
Miscellaneous
Troubleshooting
Transferring a caller to a Local Extension
If the extension is busy
Ring back extension that transferred the call
Perform Busy at extension action
If the extension does not answer
Ring back extension that transferred the call
Perform No answer at extension action
Transferring a caller to a Ring Group
If the Ring Group is busy
Ring back extension that transferred the call
Perform Busy at extension action
If the Ring Group does not answer
Ring back extension that transferred the call
Perform No answer at extension action
Transferring a caller to a Remote Extension
If the extension is busy
Ring back extension that transferred the call
Perform Busy at extension action
If the extension does not answer
Ring back extension that transferred the call
Perform No answer at extension action
Transferring from a home phone
Use transfer prefix:
Note: This prefix replaces using "Flash" when transferring calls using a telephone in parallel with TalkSwitch. To transfer a call to a TalkSwitch extension or voice mailbox, dial the prefix and after hearing a "double beep", dial the extension or voice mailbox and hang up.

Transferring a caller to a Local Extension:

When performing this action, in the case of the extension not answering or being busy, you have the choice of TalkSwitch either ringing back the extension that transferred the call or performing the "no answer" or "busy" action of the extension that the call was intended for.

You also have the choice to adjust this setting for both the Remote Extensions and Extension Ring Groups. Any changes made in this section affect the entire system.

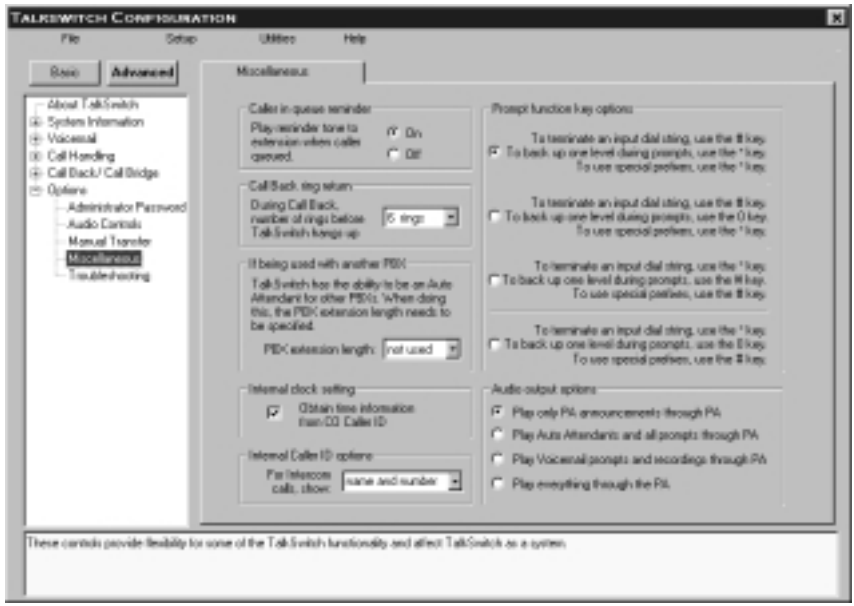
Transferring from a Home phone:

You can transfer a call from a phone connected in parallel to one of the incoming TalkSwitch lines (Home phone) to a Local or Remote Extension, Extension Ring Group, an Announcement, or a Voice mailbox. This section allows you to choose which transfer prefix you would like to use to perform the action. The transfer prefix 'wakes up' TalkSwitch and can be considered the equivalent of the Flash or Link action at a Local Extension. By default the prefix is ✱✱.

Example: Let's say you receive a call on a phone in your home that is not an extension of TalkSwitch and you want to transfer the caller to Remote Extension 215. You would then dial ✱✱, wait for the 'double beep' then dial 215 and hang up. TalkSwitch will now handle the call. For more details, see section 3.2.8.

2.3.5.4 Miscellaneous

All of the following options affect TalkSwitch as a system. Adjust them according to your needs.


TALKSWITCH CONFIGURATION
File
Setup
Utilities
Help
Basic
Advanced
Miscellaneous
About TalkSwitch
System Information
Voicemail
Call Handling
Call Back / Call Bridge
Options
Administrator Password
Audio Controls
Manual Transfer
Miscellaneous
Troubleshooting
Caller in queue reminder
Play reminder tone to extension when caller queued.
On
Off
Call Back ring return
During Call Back, number of rings before TalkSwitch hangs up
6 rings
If being used with another PBX
TalkSwitch has the ability to be an Auto Attendant for other PBXs. When doing this, the PBX extension length needs to be specified.
PBX extension length:
not used
Internal clock setting
Obtain time information from CO Caller ID
Internal Caller ID options
For Intercom calls, show:
name and number
Prompt function key options
To terminate an input dial string, use the # key.
To back up one level during prompts, use the * key.
To use special prefixes, use the * key.
To terminate an input dial string, use the # key.
To back up one level during prompts, use the 0 key.
To use special prefixes, use the * key.
To terminate an input dial string, use the * key.
To back up one level during prompts, use the # key.
To use special prefixes, use the # key.
To terminate an input dial string, use the * key.
To back up one level during prompts, use the 0 key.
To use special prefixes, use the # key.
Audio output options
Play only PA announcements through PA
Play Auto Attendants and all prompts through PA
Play Voicemail prompts and recordings through PA
Play everything through the PA
These controls provide flexibility for some of the TalkSwitch functionality and affect TalkSwitch as a system.

Caller in queue reminder

When a caller is in queue at an extension which is off-hook, a reminder tone is played at the extension to let them know they have a caller in their queue. This option allows you to turn off this function.

Call Back ring return

You can adjust the number of rings during a Call Back session before TalkSwitch disengages the Call Back (i.e. hangs up). Depending upon the situation you may want to give yourself more time to pick up and accept the Call Back by increasing the number of rings.

If being used with another PBX

This feature can only work with PBXs that use "flash-hook" as a transfer method. Please contact your PBX manufacturer for transfer details.

PBX extension length:

If TalkSwitch is being used as an Auto Attendant with another PBX, you can set the number of digits the PBX uses for its extensions. This allows TalkSwitch to know what digits to pass on to the PBX to complete the transfer.

Setting up TalkSwitch behind an existing PBX:

1. Connect the PBX extension to one of TalkSwitch's Line jacks. You may do this with all your TalkSwitch lines (1 PBX extension per line) depending upon how many Auto Attendant ports you would like on the PBX.
2. Configure your PBX on incoming calls to ring the extensions you have allocated to the TalkSwitch Lines.
3. Configure TalkSwitch's Auto Attendants to answer at which ring (answer immediately is used most commonly).
4. Record your Auto Attendants. The Auto Attendants should indicate that the digit '7' with the PBX extension should be dialed.

Example: If you have chosen the PBX extension length to be 3 digits (and let's say John Doe's extension is 111 on the PBX), the Auto Attendant should say "To speak with John Doe, press 7111…". Now when 7111 is dialed, TalkSwitch puts the caller on hold and transfers the caller to extension 111.

Internal clock setting:

TalkSwitch can obtain time information from Caller ID for it's internal clock. If you have indicated that you do have Caller ID on any of the lines, this option defaults to the active position. If it is de-activated, TalkSwitch can obtain it's time information from the time and date set in the 'Mode' tab under Automatic Mode Switching. TalkSwitch's clock information is used for Automatic Mode Scheduling and for internal Caller ID information when intercom calls are placed in the office.

Internal Caller ID options:

TalkSwitch has the ability to generate name and number Caller ID to each extension during intercom calls. If your Caller ID unit/telephone does not support the name option, you can choose to have TalkSwitch send the number only.

Prompt function key options:

Some phone cards and phone services use different keypad digits for some of their features. Four options are given to allow flexibility with other systems. If required, choose an option that best suits working with your phone card or phone service. You can use these prefixes for entering phone numbers when calling into TalkSwitch and using Call Back and Call Bridge using 3-way calling.

The following describes how to input special prefixes depending upon which key is used.

When using the * key:	When using the # key:
** = *	#* = *
* 0 = 2 second pause	# 0 = 2 second pause
* 1 = Wait for dial tone	# 1 = Wait for dial tone
* # = #	# # = #

Example: You want to change the Prompted Call Back phone number remotely and the special prefix key is the * key. After you dial into TalkSwitch and press '6' for Call Back, you go into the options for Prompted Call Back and select to change the phone number. When prompted to enter the phone number, you enter:

**70*018005551212#

This tells TalkSwitch that you want it to dial:

*70 (2 second pause) 1-800-555-1212

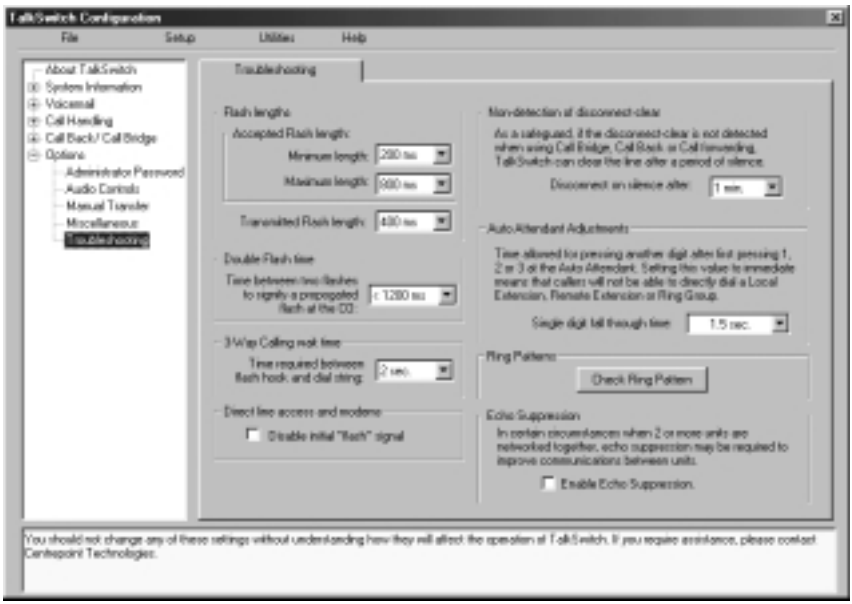
Audio output options:

The following controls can be used for various reasons including demonstrating TalkSwitch and screening callers using Voicemail. By default the system is set to play only PA announcements through the PA output when * 0 is dialed at a Local Extension.

If you are a single person operation and would like to screen all voicemail messages being left on TalkSwitch, you can connect a speaker to the PA output and select 'Play Voicemail prompts and recordings through PA'. When a caller goes to voicemail, you will hear your greeting and the caller leaving a message. If you wish to interrupt and speak to the caller, dial * 9 from any Local Extension.

2.3.5.5 Troubleshooting

The following controls should not be changed unless you are familiar with the effect they will have on TalkSwitch's operation. If your system does not appear to be functioning properly, please contact your reseller for assistance.


TalkSwitch Configuration
File
Setup
Utilities
Help
About TalkSwitch
System Information
Voicemail
Call Handling
Call Back / Call Bridge
Options
Administrator Password
Audio Controls
Manual Transfer
Miscellaneous
Troubleshooting
Troubleshooting
Flash lengths
Accepted Flash length:
Minimum length:
Maximum length:
Transmitted Flash length:
Double Flash time
Time between two flashes to signify a propogated flash at the CO:
3 Wire Calling wait time
Time required between flash hook and dial string:
Direct line access and modems
Disable initial "flash" signal
Non-detection of disconnect clear
As a safeguard, if the disconnect clear is not detected when using Call Bridge, Call Back or Call forwarding, TalkSwitch can clear the line after a period of silence.
Disconnect on silence after:
Auto Attendant Adjustments
Time allowed for pressing another digit after first pressing 1, 2 or 3 at the Auto Attendant. Setting this value to immediate means that callers will not be able to directly dial a Local Extension, Remote Extension or Ring Group.
Single digit fall through time:
Ring Pattern
Check Ring Pattern
Echo Suppression
In certain circumstances when 2 or more units are networked together, echo suppression may be required to improve communications between units.
Enable Echo Suppression
You should not change any of these settings without understanding how they will affect the operation of TalkSwitch. If you require assistance, please contact Centrepoint Technologies.

Flash Lengths

Accepted Flash Length:

These options control the allowable Flash length from a Local Extension that TalkSwitch will consider to be an intentional Flash. The range can be adjusted to accept anything from 50ms to 1 second. The default range for accepting a Flash signal at a Local Extension is between 200 ms and 800 ms. Most phones emit a 300 ms Flash signal when the 'Flash' or 'Link' button is pressed.

Transmitted Flash Length:

This option controls the transmitted Flash length from TalkSwitch to the Telephone Company lines. TalkSwitch emits a Flash when forwarding or bridging calls using the 3-Way Calling/Conference or Centrex Transfer service, or when transferring calls through an existing PBX system. The value can be adjusted from 50 ms to 900 ms. The default setting is 400 ms. If you notice that you are having problems with any of the TalkSwitch features that use 3-way calling, you may want to experiment with this value.

Double Flash time:

When two flashes are detected, TalkSwitch needs to calculate the time between the flashes to establish if they were intended to propagate a flash at the CO or if it was the intention to place a caller on hold then quickly retrieve them. The Double Flash time values signify the maximum time between two flashes that TalkSwitch will recognize as an intended flash to the CO. When two flashes are detected with a time gap larger than the value displayed, no flash will be propagated at the CO. The value can be adjusted from 200ms to 2000ms with the default set at 1200ms.

3-Way Calling wait time:

This option adjusts the time required between flash hook and a dial string. Some telephone company 3-Way Calling/Conference services require different time allowances after the flash signal to re-establish dial tone. The default time is 2 seconds so that TalkSwitch can let the lines settle after going off hook before sending the DTMF digits.

Direct line access and modems:

Some modems emit a flash signal when going off hook. If this occurs in unison with direct line access, the modem can potentially put the outside line "on-hold" when going off-hook. By activating this option, TalkSwitch captures and ignores the first flash signal thus avoiding potential problems.

Non-detection of disconnect-clear:

This option controls the length of time when TalkSwitch will "drop" a line when silence is heard. This safeguard is very useful when a telephone line does not send out the disconnect-clear signal that tells TalkSwitch the call is finished.

Auto Attendant Adjustments:

Since TalkSwitch allows callers to dial 100, 200 and 300 series extensions and also allows fall through options for the single digits 1, 2 and 3 at the Auto Attendant, there needs to be a time limit placed on how much longer after the first digit is pressed that TalkSwitch will wait for another digit before following the single digit option configured for that particular Auto Attendant. There are 3 ways to make use of this control. You should be careful not to isolate your callers from having both choices as listed in (1).

1) With the current setting, callers can dial any Local Extension (1xx), Remote Extension (2xx), or Ring Group (3xx) as long as the second digit is pressed within 1.5 seconds of pressing the first digit. Callers can also press just 1, 2, or 3 for options and when TalkSwitch detects no second digit within 1.5 seconds, it will follow the programmed option for that Auto Attendant.

2) If you don't want to use the options 1, 2, and 3 for any of the Auto Attendants, you can set the option to '4 seconds'. This pretty much guarantees that callers will have more than enough time to dial all 3 digits of any extension without accidentally falling through to one of the Auto Attendant options.

3) If you don't want to give callers the ability to dial any of the extensions and only permit them to access single digit options, set this value to 'immediately'. As soon as TalkSwitch detects the first digit, it will follow the specified option for that Auto Attendant.

Ring Patterns:

This option allows you to check the ring pattern of your Telephone Company lines. When you activate this feature, you will need to call into any of the lines connected to TalkSwitch and let it ring at least 3 times before the Auto Attendant answers the call. After TalkSwitch captures 2 ring patterns, the information will be displayed in a dialog box. Please take note of this information and pass it along to Centrepoint Technologies support if you are having problems with TalkSwitch answering the lines and playing the Auto Attendant.

Echo Suppression:

This option only applies when 2 or more units are networked together on a LAN. This feature improves echo related issues that can arise with certain line conditions. If you notice echo related symptoms on some calls, it may be that these calls are originating from another unit on the LAN and the line conditions at your location require echo suppression. The echo suppression uses a half duplexing feature to handle the echo. With half duplex calls, only one side of the call can talk at a time. If you encounter problems with 'double talk' - people trying to interrupt each other - which can disrupt the echo suppression, you can try disabling the echo suppression to see if this resolves the problem.

3 Using TalkSwitch

3.1 In the Office - Receiving Calls with or without the Auto Attendant

3.1.1 Receiving calls using the Auto Attendant

If you don't have a receptionist, then using the Auto Attendant will help you handle all your inbound calls and help improve your corporate image. Once it has been configured and its messages have been recorded, that's it! The Auto Attendant takes care of the rest. It will follow whatever instructions (configuration) it was given. For details on configuring the Auto Attendants, see section 2.3.2.2. For details on configuring TalkSwitch to answer calls using Auto Attendants, see section 2.3.2.3.

When calls are answered by an Auto Attendant, callers can dial any Local Extension (1xx), Remote Extension (2xx), Extension Ring Group (300 - 309), choose options 0, 1, 2, 3, 4, 5 if configured to perform specific actions, dial voicemail direct (* + mailbox), send faxes, or remain on the line to follow an action programmed for that Auto Attendant. TalkSwitch owners and employees can also access other options at the Auto Attendant including Call Back (dial 6), Call Bridge (dial 80 - 88, 9), retrieve voicemail (dial ** + mailbox), enter command mode to make system changes (dial #). All of these features can be password protected to eliminate system tampering from outside users.

If you subscribe to Caller ID service, you may want to set the Auto Attendant to answer after at least 1 ring to give TalkSwitch a chance to capture the Caller ID information. All calls ring at least one more time than what's listed for the configuration in the Telephone Lines section under Call Handling. TalkSwitch 'absorbs' this first ring to determine the ring pattern of the inbound calls so that this same ring pattern can be duplicated to the Local Extensions.

3.1.2 Receiving calls without the Auto Attendant

If you choose not to use the Auto Attendant to answer calls, please note that the Call Cascade options for the Local Extensions will not be engaged. In order for any Call Cascade sequence to work, the Auto Attendant must first answer the call. For details on configuring TalkSwitch to ring specific extensions during inbound calls, see section 2.3.2.3. Once calls have been answered at a Local Extension, they can be transferred to any extension or voice mailbox. See section 3.2 for more details.

3.2 In the Office - Making and Receiving Calls

3.2.1 Making calls from a Local Extension

Placing Intercom calls from one Local Extension to another Local Extension, Remote Extension or Extension Ring Group:

You can place intercom calls from one Local Extension to another Local Extension, Remote Extension or Extension Ring Group by simply picking up the extension's handset and dialing the number of the extension with which you wish to intercom. An Intercom call can be identified by a unique ring cadence (2 short rings) except in the case of a Remote Extension Intercom call where the phone will ring as usual or if a Ring Group has selected a different ring cadence other than 'normal'. **Intercom calls do not follow Call Cascade sequences of the extensions. Call Cascade is only followed after the call has been transferred.**

Placing 'out-of-office' calls from a Local Extension:

To place a call to an out-of-office telephone number from a Local Extension you must first access an available line by choosing a Hunt Group (9, 81-88) at the internal dial tone. Restrictions to specific Line Hunt Groups can be configured per extension. Your extension can also be configured to Directly Access a specific line (i.e. when a handset is picked up, you will hear the Telephone Company dial tone (not TalkSwitch's) and can dial an outside telephone number as usual).

If you have Direct Line Access enabled for a Local Extension, you will need to dial 'Flash' before dialing any extensions, accessing voicemail or other system features.

3.2.2 Receiving calls at a Local Extension

To receive calls at a Local Extension, simply pick up the extension's handset when the extension rings. If the call went through the Auto Attendant to the extension and it has call screening enabled (configured on the Local extension and Ring Group pages), you have the choice of accepting the call by pressing # or, re-routing the call to it's 'Answer at ext.' Call Cascade options by pressing * or hanging up.

Call Pick Up/Call Grab:

To intercept a call that is ringing on any other Local Extension before or after the Auto Attendant has engaged, pick up your handset and at the TalkSwitch internal dial tone, dial *9. This will route the call to your Local Extension.

To "Grab"a call ringing specifically at another extension before or after the Auto Attendant has answered, dial *7 + the extension number (ie. *7112 to grab a call ringing at extension 112). If you are in the middle of a call and want to connect to another caller calling in, press 'flash' to place the first caller on hold, then dial *9 or *7 + <ext.> to connect to the second caller. Once you are finished the second call or you would like to return to the first caller, press 'flash' '7'.

3.2.3 Placing calls on Hold at a Local Extension

To Place calls on hold:

To place callers on hold, press 'flash'. Follow the same procedure to take callers off immediate hold. If you have multiple callers on hold or in queue at your extension, you can press 'flash' '7' to retrieve callers on a first in / first out basis.

If you use the 'Hold' button on your phone, you will not be able to access any of the TalkSwitch features while the caller is on hold. Also, if you have Music-on-hold enabled, the caller will not hear music while they are on hold.

3.2.4 Transferring calls

From a Local Extension to another Local Extension, Remote Extension or Extension Ring Group:

To initiate an Unscreened Transfer - Put the caller on hold (by dialing 'flash'), dial the appropriate extension number and hang up. The caller will be taken off hold when the receiving extension is answered. If the transferred call is not answered after the number of rings specified in the No Answer setting for the destination extension or, if the extension is busy, either of the following will happen:

Default:	The transferred call will be handled according to the destination extension's No Answer or, Busy at extension settings.
Option:	The call will be transferred back to the transferring extension.

These options are chosen in the Manual Transfer tab in the Options folder.

To announce calls before transferring (Screened Transfer) - Put the caller on hold and dial the appropriate extension number. If the person at the receiving extension answers and wishes to take the call, simply hang up or dial 'flash' '4' to complete the transfer and get internal dialtone. The caller will immediately be taken off hold and connected with the receiving extension. If the person at the receiving extension does not wish to take the call, you can press 'flash' '5' to return to the caller.

Keep in mind that if you dial an extension and it is busy or not answered, you can still complete the transfer so that the caller will be directed according to that extensions' Call Cascade settings.

If you tend to handle many calls, you may want to *complete* or *cancel* a transfer without hanging up. Flash '4' will *complete* the transfer and then provide internal dialtone while flash '5' will cancel the *transfer* and connect you back to the caller.

From a Local Extension to any outside telephone number:

To initiate an Unscreened Transfer - Put the caller on hold, select a Line Hunt Group (dial 80 for Same Line Connect), then dial the outside telephone number then press 'flash' '4' to complete the transfer. **You cannot simply hang up to complete the transfer otherwise the calls will be disconnected.**

If the person at the receiving extension does not wish to take the call, you can press 'flash' '5' to return to the caller.

If you have the 3-Way Calling/Conference or Centrex Transfer feature enabled on the current line, you can select the Same Line Connect (80) to make use of these features. Everything proceeds as outlined above other than the fact that you are using the same line to transfer the call.

3.2.5 Call Park - Parking and retrieving callers

Call Park is a useful feature for placing a caller on hold and then being able to retrieve them from any other Local Extension. TalkSwitch has 10 Park Orbits for all models.

To place a caller in a Park Orbit, press 'flash' then * and choose a Park Orbit (500 to 509). You will hear a confirmation after parking the caller that indicates the caller has been parked successfully. If the Park Orbit is already occupied, you will hear "I'm sorry, that extension is unavailable at this time." then dialtone. Once again press * and choose a new Park Orbit. Once the caller is parked, you can retrieve the caller at another Local Extension by pressing ** and the appropriate Park Orbit. *If Direct Line Access is enabled at the extension, then you must press 'flash' first.*

If you have the External Paging option enabled on TalkSwitch, you may choose to announce over the P.A. system (by pressing *0) that there is a call parked in a specific Park Orbit for a co-worker. For example: "Bob, please pick up 501." - which tells Bob that he can retrieve the parked call from any extension by getting dial tone and pressing **501. The caller will now be connected to Bob at that extension. *If you have Direct Line Access enabled at your extension, you will need to press 'flash' first before retrieving the parked call.*

3.2.6 Call Queue - Queuing and retrieving callers

Call Queue is a useful feature for placing multiple callers on hold at your extension. It is similar to the telephone company feature Call Waiting. Call Queue is enabled in the Call Cascade section in the Call Handling folder for Local Extensions and Extension Ring Groups. Callers will get queued at your extension if you set the first level in the 'Busy at extension' Call Cascade to 'queue caller'.

If an extension is chosen at the Auto Attendant or the caller is transferred from another extension and the extension is currently busy and has 'queue caller' set for the 'Busy at extension' Call Cascade, the caller will hear one of the following prompts then music (if enabled) while they are on hold:

If the call came from the Auto Attendant and the extension has a voice mailbox:

> "The extension you have reached is currently busy. If you wish to continue holding, please remain on the line. To leave a voicemail message, press 1, and to return to the main menu, press *."

*If the call came from the Auto Attendant and the extension has **no** voice mailbox:*

> "The extension you have reached is currently busy. If you wish to continue holding, please remain on the line and to return to the main menu, press *."

If the call was transferred from another extension, there is no Auto Attendant on this line and the extension has a voice mailbox:

> "The extension you have reached is currently busy. If you wish to continue holding, please remain on the line. To leave a voicemail message, press 1."

*If the call was transferred from another extension,there is no Auto Attendant on this line and the extension has **no** voice mailbox:*

> "The extension you have reached is currently busy. If you wish to continue holding, please remain on the line."

While the caller is on hold at your extension you will hear a 'Call Waiting' beep in your ear every 45 seconds. If you want to rotate through queued callers, dial 'flash' then '7'. The caller you are speaking to will be placed on hold, and the first caller in the queue will be retrieved. If you have multiple callers queued up, pressing 'flash' then '7' will retrieve callers on a first in/first out basis.

Queuing callers from an Extension Ring Group

If you want to queue callers for a Ring Group, you can only queue callers to one of the extensions in the Ring Group and not to the entire Ring Group. TalkSwitch cannot currently perform Automatic Call Distribution with Ring Groups. This capability may be introduced as a future firmware upgrade.

3.2.7 Conference calling with TalkSwitch

2 TalkSwitch Local Extensions and 1 outside caller:

You do not require access to the telephone company's 3-Way Calling/Conference service to use TalkSwitch's conference calling capabilities.

1. Establish a call with an outside party.
2. Place the outside caller on hold by pressing 'flash' and dial the number of the Local Extension you wish to conference with.
3. When the extension is picked up, you can establish the 3-way call at anytime by pressing 'flash' then '6'.

2 outside callers and 1 Local Extension (eg: Line 1 and Line 2):

You can do this type of conference call using two different methods.

The first method is similar to above, using only TalkSwitch for the conference function.

1. Establish a call with an outside party.
2. Place the outside caller on hold and dial the number of the other outside party you wish to conference with. If you have 'Direct Line Access' enabled at your extension, you will first need to dial '9' or another Hunt Group before dialing the second phone number.
3. When the call is answered, you can establish the 3-way call at anytime by pressing 'flash' '6'.

When using the telephone company's 3-Way Calling/Conference service you can conference by following the instructions below:

1. Establish a call with an outside party.
2. Place the outside caller on hold by pressing 'flash' twice and then dial the number of the other outside party you wish to conference with.
3. When the call is answered, you can establish the 3-way call at anytime by pressing 'flash' twice.

If you are experiencing problems with pressing the flash key twice in a rapid succession (ie. pressing the flash key twice within 1.5 seconds), then you can make changes in the software that will make it easier to accomplish this task. See section 2.3.5.5 for details on setting the Double Flash Time.

3.2.8 Using Phones connected in parallel to TalkSwitch

Phones connected in parallel (not connected to TalkSwitch but connected to the same line) with TalkSwitch will always ring at least once before TalkSwitch starts ringing its extensions or the Auto Attendant answers the call . This occurs because TalkSwitch uses the first ring to identify the incoming ring pattern before passing it on to the extensions or the Auto Attendant (e.g. TalkSwitch determines if the call is a Distinctive Ring and detects any Caller ID information). A parallel phone can 'barge in' on any telephone call on any of TalkSwitch's Lines.

Making and receiving calls on phones connected in parallel with TalkSwitch:

Making Calls: Make calls on parallel connected phones just as you would if TalkSwitch were not sharing the telephone line with them.

Answering Calls: If a call is answered on a parallel connected phone before the Auto Attendant engages, simply continue with the call as per usual, TalkSwitch will take no further action. If a call is answered on a parallel connected phone after the Auto Attendant engages, you can turn off the recorded Auto Attendant message by using the phone's touchtone keypad to dial '✱✱ 0'. You may then continue the call on the parallel connected phone.

Transferring calls on parallel connected phones:

Calls answered on a parallel connected phone can be transferred to any TalkSwitch extension or voice mailbox. If you want to transfer the caller, simply key in the 'Transfer Prefix ✱✱', after you hear 2 'beeps' enter the extension or voice mailbox number then hang up. You cannot announce a caller to the transferred extension, but if you do stay on the line, you will be in a 'conference call' state. You can hang up at any time.

If you transfer a call from a parallel connected phone and then hang up, the extension will ring the number of times selected for that extension. If the extension is not answered within the specified number of rings, the call will be handled according to that extension's Call Cascade actions.

When a phone in parallel with TalkSwitch is off-hook, you will notice that the corresponding line light will flicker to indicate the line is occupied. TalkSwitch will not allow extensions to barge in on a call when that line is in use.

You have the ability to change the Transfer Prefix to ✱# instead of ✱✱. You may need to change the prefix if the default prefix conflicts with another device or service. To change the Transfer Prefix, open the configuration software and change the setting in the Manual Transfer tab under 'Options'.

3.2.9 Modems and telephone line access

If your modem is attached to TalkSwitch as an extension, you can configure it to access your telephone lines in one of two ways:

1. Direct Line Access: You can give the extension to which your modem is attached 'Direct Access' to one of your telephone lines (i.e. you don't have to dial 9, or any other Hunt Group to access an outside line). This can be a useful option if you don't want to change your dial-up options for the modem. See section 2.3.1.4 for more details on configuring Direct Line Access.

2. Hunt Groups: If you have decided to use a telephone and modem on the same extension, Direct Line Access may not be the best solution. TalkSwitch extensions with Direct Line Access immediately connect to one of your lines when you pick up the telephone's handset. Therefore, you are unable to select a specific telephone line or access voicemail, intercom or access other system features without first pressing 'flash'.

To have your modem access a specific line using a Hunt Group:

Change your modem's 'Dial Properties' to include the intended Hunt Group (81-88 or 9) followed by the letter 'w', before the 'Dial up Networking' telephone number (e.g. 9w555-5555). Including the letter 'w' after your 'Dial out Access' number instructs your modem to a) dial the access number 81-88 or 9, b) wait until it detects a dialtone, and then c) dial your 'Dial up Networking' number.

If your modem is having problems dialing out, you may have to use a comma ',' which represents a 2 second pause, instead of the 'w' for 'wait for dialtone'.

To change your modem's dial properties in Windows 95/98:

1. 'Double Click' on the 'My Computer' icon on your Windows screen. Then 'double click' on 'Control Panel', and finally 'Modems'.
2. When the 'Modems Properties' screen opens, click on the 'Dialing Properties' button.
3. In the section labeled 'To access an outside line, first Dial', enter the Dial out Access number (81-88, or 9) that you have chosen to use. (Enter your Dial out Access number for both local and long distance numbers.) Then type in the letter 'w' or ',' directly after the Dial out Access number.
4. Click the 'OK' button to save your changes and close the screen then close the 'Modems Properties' screen.

If you use Direct Line Access, you do not need to put the Hunt Group in the dialing string.

3.3 Out of the Office - Receiving Calls through Call Forwarding

3.3.1 The three ways to forward calls

1. Automatic call forwarding - The Auto Attendant can automatically forward office calls to your call forwarding telephone number(s) (Remote Extensions). This is done by using the Auto Attendant message to prompt callers to select your Remote Extension number(s). (e.g. "To speak to John Doe, press 211.")
2. Manual call forwarding - If someone in your office has answered a call at a Local Extension, the call can be 'transferred' to one of the call forwarding (Remote Extension) numbers. Simply put the call on hold at the Local Extension, dial the Remote Extension number (e.g. 211) to which you want the call forwarded and then hang-up. The call will be handled according to the Call Cascade options of that Remote Extension.
3. Conditional call forwarding - If the Auto Attendant answers a call and the caller selects an extension or Ring Group number that is already busy or is not answered, the Auto Attendant can forward the call to a Remote (out of office) extension number. Conditional call forwarding is configured using the Call Cascade's 'No answer' or 'Busy at extension' settings configurable for each Local Extension, Remote Extension and Ring Group.

3.3.2 Screening options for forwarded calls

The screening options for Call Forwarding are configured using the Call Cascade's 'Answer at ext.' options available in the 'Remote Extension' tab, see section 2.3.3.5

Forwarding calls with screening:

When 'play accept/reject prompt' is configured in the 'Answer at ext.' Call Cascade option, TalkSwitch plays a pre-recorded prompt to the caller asking them to hold, and then dials your call forwarding telephone number. When you answer the forwarded call, TalkSwitch plays a pre-recorded prompt to you that identifies the call as having been forwarded from your home/office ("This is Call Forward"). You then have the choice of accepting the forwarded call by pressing # on your telephone keypad or, re-routing the call to it's call screening Call Cascade options by pressing * or hanging up.

When 'play caller's name first' is configured in the 'Answer at ext.' Call Cascade option, TalkSwitch plays a pre-recorded prompt to the caller asking them to record their name at the sound of the tone. TalkSwitch then asks the caller to hold and dials your call forwarding telephone number. When you answer the forwarded call, TalkSwitch plays a pre-recorded prompt identifying the call as having been forwarded from your home/office ("This is Call Forward, you have a call from...") and then plays the recording of the callers name. You have the choice of accepting the forwarded call by pressing # on your telephone keypad or, re-routing the call to it's call screening Call Cascade options by pressing * or hanging up.

When either screening option is used, and you have music on hold enabled and you are not using the 3-way calling feature (Same Line Connect) to forward calls, then the caller will hear music while TalkSwitch is waiting for the Remote Extension to accept the call.

If a forwarded call is not answered or the line is busy, TalkSwitch will perform the following based upon how the call was originally forwarded:

If the call was automatically forwarded: the call will follow the Remote Extension's 'No answer at ext.' or 'Busy at extension' Call Cascade action.

If the call was manually forwarded: The call will follow the Remote Extension's 'No answer at ext.' or 'Busy at extension' Call Cascade action. This action can be changed to ring the extension back who performed the transfer in the Options>Manual Transfer tab.

If the call was conditionally forwarded: The call will follow the following Call Cascade action in the 'No answer at ext.' or 'Busy at extension' for the original extension chosen.

3.4 Using the TalkSwitch Voicemail System

Your TalkSwitch system comes with approximately 25 minutes of voicemail recording capacity shared with Auto Attendant greetings. On the TalkSwitch 48 models, this capacity can be increased with the addition of TalkSwitch memory cards. You can add another 1/2, 1, 2 or 4.5 more hours of storage. Contact your reseller to purchase memory cards. When a TalkSwitch memory card is inserted in the memory slot, the system will automatically configure the card within 20 seconds to make it fully functional.

3.4.1 Activating Voice mailboxes

A Voice mailbox is activated from the TalkSwitch configuration software. There are 3 series of Voice mailboxes that can be activated in the Voicemail section of the configuration:

Local Extension mailboxes:

These mailboxes are generally associated to the Local Extensions. By default, all Local Extensions are activated with their respective mailbox.

Remote Extension mailboxes:

The Remote mailboxes are associated with the Remote Extensions. If you activate a Remote Extension and want a voice mailbox associated with that extension, you can activate that mailbox in the Voicemail tab.

General mailboxes:

These mailboxes are activated in the Voicemail tab. They are not associated to any particular extension.

If you want inbound calls to go straight to a voice mailbox after x number of rings, then you need to program an Auto Attendant to answer first, then provide a fall through to voicemail. See section 2.3.3.3 for an example of this configuration.

Callers can reach voicemail or announcements via the Auto Attendant, Call Cascade, or transferred from a Local Extension. If an employee wants to leave a message in a particular mailbox, they can pick up a Local Extension and dial * + <mailbox number>. To transfer a caller to voicemail, press 'flash' then * + <mailbox number>.

When a caller presses # after leaving a message or 2 minutes has elapsed(timeout period, TalkSwitch will play a prompt asking the caller if they wish to keep the message, listen to the message or record a new message.

3.4.2 Accessing a Voice mailbox

When a new message is left at a Local Extension mailbox, TalkSwitch will play stutter dial tone to that extension when the handset is picked up. It can also light up the message waiting light on a phone if it supports FSK Message Waiting Indicator.

To access a mailbox to retrieve messages or change mailbox options, dial ✱✱ + <mailbox number> either from a Local Extension or at the Auto Attendant if dialing from an outside location. Employees can also transfer other employees to access voicemail by pressing 'flash' then dialing ✱✱ + <mailbox number>. *If you have Direct Line Access enabled, be sure to press 'flash' before accessing your mailbox.*

The first time you dial ✱✱ + <your mailbox number>, you will be prompted to setup your mailbox by optionally assigning a password, recording a greeting and recording your name for the dial by name directory. Since there are no directory listings for the general mailboxes, you will not be prompted to record a name for the directory. Keep in mind that you should always use the mailbox associated to the same extension since the directory is related to the extension and voice mailbox.

Once your mailbox has been setup and you access your mailbox, through prompt instructions you may do the following:

Listen to messages (press 1):

If there are any messages in your mailbox, you will be able to access them by pressing 1. TalkSwitch will always start with new messages before playing back any older messages. You have the ability to perform the following actions while listening to a message and after listening to the message:

Dial 1:	Rewind 10 seconds
Dial 11:	Rewind to beginning of message
Dial 3:	Skip ahead 10 seconds
Dial 33:	Skip to end of message
Dial 6:	Forward the message
Dial 7:	Delete message
Dial 9:	Save message
Dial ✱:	Back up one level
Dial #:	Skip to next message - New messages left as new.

Change greeting options (press 2):

This section allows you to record a new personal voicemail greeting. The default greeting is "The extension you have reached is unavailable at this time. Please leave a message after the tone".

Keep in mind while recording your greeting or announcement that callers can press * to return to the previous Auto Attendant (if the call came from the Auto Attendant) while listening to your greeting and can press # when they are done recording for more options. You may want to give your callers these options for their convenience.

Change personal options (press 3):

This section allows you to change your current password, turn auto date and time stamp + phone number on or off and setup or change Pager and Remote Phone Notification for new messages. By default, auto date and time stamp is on and this information is played at the end of each message. If you have Caller ID service, then the phone number is also included with the time and date.

Record name for Dial by Name Directory (press 4):

If you have not already recorded your name for the directory or wish to change the recording, you can do so here. The dial by name directory is accessed at the Auto Attendant according to your configuration. Callers are directed to enter the first 3 letters of the employee's last name. The system will find the exact or closest match then play the recorded name + the extension number, then give them the option to connect to that extension.

3.5 Music-on-Hold

TalkSwitch can play music to callers when they are on hold, parked or queued. The music played to the callers will be provided by whatever source you have connected to the MUSIC jack.

If you ENABLE Music-on-Hold and have an audio device plugged into the back of TalkSwitch:

1. When callers are put on hold at an extension, callers will hear your music instead of TalkSwitch's default on-hold beeping tone.
2. When the Auto Attendant answers a call and transfers the caller to an extension; the caller will hear a pre-recorded message saying "One moment please", and then hear your music.

If you ENABLE Music-on-Hold and do not have an audio device plugged into the back of TalkSwitch:

1. When callers are put on hold at an extension, TalkSwitch will not play its default on hold beeping tone. The caller will hear silence.
2. When the Auto Attendant answers a call and transfers the caller to an extension, the caller will hear a pre-recorded message saying "One moment please" and then hear silence.

If you DO NOT ENABLE Music-on-Hold and have an audio device plugged into the back of TalkSwitch:

1. When callers are put on hold at an extension, callers will hear TalkSwitch's default on hold beeping tone and your music.
2. When the Auto Attendant answers a call and transfers the caller to an extension, the caller will not hear any pre-recorded message. They will hear your extension ringing and your music.

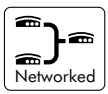
What happens if you DO NOT ENABLE Music-on-Hold and do not have an audio device plugged into the back of TalkSwitch:

1. When callers are put on hold at an extension, they will hear TalkSwitch's default on-hold beeping tone.
2. When the Auto Attendant answers a call and transfers the caller to an extension, callers will hear your extension ringing.

Music-on-Hold and Call Forwarding to Remote Extensions:

If you are using the telephone company's 3-Way Calling/Conference service (Same Line Connect) to activate TalkSwitch's Call Forwarding, callers will not hear your 'music' when being forwarded to a Remote Extension. When calls are forwarded, the caller is put on hold by the telephone company central office switch rather than at TalkSwitch. Therefore, the caller hears silence while being transferred.

A system prompt will indicate that callers will hear silence while the system tries to locate their party. This prompt helps explain to callers why all of a sudden they may hear silence for an extended period of time before possibly connecting to the Remote Extension. This prompt cannot be disabled.



If you have 2 or more units on a LAN, you will need to supply a music source to each TalkSwitch unit. 1/8" audio splitters can usually be found at most electronics stores.

3.6 Mode Switching Options

Manual Mode Switching:

You can use Telephone Keypad Commands at either a Local Extension or at the Auto Attendant to have TalkSwitch switch Modes.

At Local Extension dialtone or at the Auto Attendant, dial # to enter command mode, then enter a password if necessary. Next, dial any of the following Quick Commands followed by the # sign:

Activate Mode 1:	3 1
Activate Mode 2:	3 2
Check Current Mode:	3 0

Automatic Mode Switching using the Time Scheduler:

Use the Configuration software or Telephone Keypad Commands to activate TalkSwitch's Time Scheduler feature. You can configure TalkSwitch to automatically switch between Modes by configuring the times for Mode changes in the 'Modes' tab located under Call Handling in the configuration software.

If at anytime you switch modes manually, TalkSwitch will automatically switch to the proper mode during the next scheduled mode change.

3.7 Out of the Office - Making Calls with Call Back and Call Bridge

Working together, Call Back and Call Bridge act as your personal long distance operator. Whether you are across town or around the world, these two features allow you to place calls from your home/office telephone line(s).

3.7.1 Using Call Bridge

Call Bridge allows you to place calls using your office telephone lines when you are not in the office. You can make a direct call to TalkSwitch, access a telephone line connected to TalkSwitch and enter the number you want to dial. This is especially useful when you are out of the office with your cell phone and need to dial a long distance number. To avoid the inflated long distance cell rates all you need to do is make the local call to TalkSwitch to access Call Bridge, then make the long distance call - accessing your office savings plan.

How to use Call Bridge:

Dial into one of TalkSwitch's Lines (Main or Distinctive Ring). When the Auto Attendant answers, select a Hunt Group (81-88 or 9) or Same Line Connect (80). You will then be asked to supply your Account password to receive dial tone. If you are using Same Line Connect 80, and the line you are on supports the 3-Way Calling/Conference service, you will be prompted to enter the phone number.

When you have completed your call or if the telephone number dialed was busy, you can do one of the following:

A) Make another call: Press # #. TalkSwitch will disconnect you from the call in progress and you can dial another number or redial the same number.

B) Activate the Auto Attendant: Press # *. TalkSwitch will end the Call Bridge session and activate the Auto Attendant. Once the Auto Attendant message begins playing, you have the following options:

- Dial # (and enter a password if applicable) to enter Command Mode.
- Dial '6' to change/enter Call Back settings.
- Dial one of your extension numbers (Local, Remote or Ring Group). This option allows you to use Call Back to contact someone in your office, check your voicemail, etc.

C) End the Call Bridge Session: Simply Hang up. This will end your Call Bridge session and disconnect you from TalkSwitch. If you want to guarantee that TalkSwitch disconnects at the end of a Call Bridge session, dial # #, then hang up.

If you changed the 'Special Prefix' to # instead of *, you will need to dial * * to make another call, and dial * # to return to the Auto Attendant. To enter command mode, you will still need to enter #.

The Call Bridge telephone number dialed can be any telephone number: local, long distance, toll free (800 and 888) or international. Simply enter the telephone number as you would if you were sitting in your office. For long distance calls, do not forget to include the '1', country code, and area code if applicable.

3.7.2 Using Call Back

The Call Back feature allows you to initiate TalkSwitch to call you at a specified telephone number. This gives you access to any of the following:

- Call Bridge
- Local Extensions, Remote Extensions and Extension Ring Groups
- Voicemail
- Configuration settings

Using Call Back involves '3' easy steps:

1. You call your TalkSwitch telephone number to activate Call Back.
2. You answer and accept the Call Back. (TalkSwitch calls you back within 30 seconds.)
3. At the Auto Attendant you can: choose to perform Call Bridge, dial any extension, access and retrieve voicemail or configure TalkSwitch.

Activating Call Back:

There are two ways to activate Call Back, Prompted and Auto activation:

1. Using 'Prompted Call Back' Activation: From your out-of-office location, dial a TalkSwitch telephone number ('Main' or 'Distinctive Ring'). Let the line ring until the Auto Attendant answers your call and then dial '6' on the telephone keypad. If you have enabled password protection you will be asked to supply your password and TalkSwitch will then offer a series of prompts. Now you can either enter 1 and hang up to initiate the Call Back or, if you need to enter a new Prompted Call Back number, enter 2 to access the Prompted Call Back settings then follow the prompts.

For Prompted Call Back, TalkSwitch always dials the last Prompted Call Back number entered. If you do not have the Auto Attendant set to answer a line, a generic TalkSwitch Auto Attendant will answer after 15 rings and you can then dial 6 to access the Call Back settings.

---

2. Using 'Auto Call Back' Activation: From your out-of-office location, dial one of the Call Back telephone numbers that has been pre-configured for Auto Call Back activation. Let the line ring at least once, but no more than three times and then hang-up (before the call is answered). Within 20 seconds, TalkSwitch will dial your Auto Call Back number.

It is important to remember that all the Call Back settings must be pre-configured before using Auto Call Back. Please be sure that the Auto Attendant for the line using Call Back does not answer before 4 rings.

Accepting the Call Back:

There are two ways to accept a Call Back from TalkSwitch.

1. Call Back is normally accepted by answering the call and pressing #, then if required, entering your password. This option is used when you have a direct line to your Call Back telephone number.
2. The 'Use Announced message' option allows the Call Back from TalkSwitch to reach you even when you are staying at a hotel or are in an office where calls are intercepted by a receptionist or switchboard operator. When the Call Back is answered, TalkSwitch will begin playing your pre-recorded message (e.g. "Please forward this call to Jane Doe in room 312"). The message will be played repeatedly for '2' minutes. When the call is forwarded to you, press #, then enter your password on the telephone keypad to accept the Call Back. (If the Call Back is not accepted within the initial '2' minute period, TalkSwitch will disconnect the Call Back.) After you accept the call, you will hear the Auto Attendant, and you can now make your selection to check your voicemail, ring an extension, use Call Bridge, or enter command mode.

3.8 Upgrading the TalkSwitch Firmware

We are continually looking for ways to enhance your communications capabilities. When new features are added, we want TalkSwitch users to have immediate access to the update.

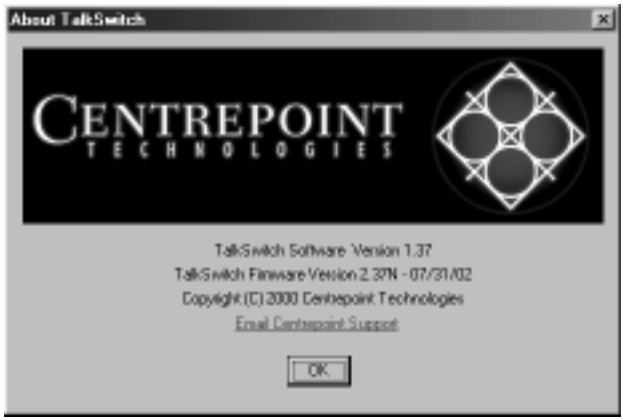
The ease with which TalkSwitch's firmware program can be updated and the convenience of having updates readily available to users on our website, makes it possible for us to provide quick and easy TalkSwitch enhancements!

TalkSwitch's firmware program (or the programming code that operates your TalkSwitch) is located on a 'Flash EPROM'. This means that the code operating your TalkSwitch can be 'updated' without removing the chip that contains the code. Because of this, you can easily update your TalkSwitch by disk or by visiting our website at www.talkswitch.com/support and downloading any new updates.

Step # 1

The first step is to select and download the proper update file from the Centrepoint Technologies website (www.talkswitch.com/support). The firmware and software will be integrated in one file.

To identify the appropriate update file, you must first determine your TalkSwitch firmware and software version. You can find your TalkSwitch version numbers by selecting 'About' from the main splash screen or on the 'About' tab in the configuration.



Write down the software and firmware version numbers and then go to the Centrepoint Technologies website at www.talkswitch.com/support. You will find instructions there to help you to select and download the appropriate upgrade. Follow the instructions on the site as they take precedence over these instructions.

Step # 2

When you select and click on the appropriate version for download, a screen will appear asking you what you would like to name the file you are about to download, and in which folder/directory you would like to save it. We suggest leaving the file name 'as is' (install.exe) and saving it on your Desktop. Once the download is completed, you can begin your upgrade by double clicking on the 'install.exe' file or use the 'Run' option on your Windows 'Start' menu. A series of screens will guide you through the installation process.

Step # 3

If you have multiple units on a LAN, please go to step 4.

The final step in the upgrade process is to open the TalkSwitch software and select 'Flash Upgrade' from the main splash screen. A screen will appear warning you not to interrupt the update process once it has begun. Click on the "Yes" button to proceed. A second screen will then appear asking you to select the appropriate update (.bin) file. If you see more than one .bin file, select the most recent file (the one with the highest number in the first 4 digits of the file name).

Highlight the newest firmware file, then click the "Open" button.

The final stage of the update process will take approximately 5-15 minutes depending on how you are connected for the update, during which time the LED lights on TalkSwitch's front panel will show diagnostic indicators for part of the update, then the Data light will flicker for the remaining portion of the update if the prompts need to be loaded.

When the update is complete, you will see a message indicating the update was successful.

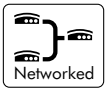
Click the "OK" button and the TalkSwitch software will then close. There is no need to restart Windows or TalkSwitch - your updated TalkSwitch Firmware is now ready to go!

In the event the firmware update was unsuccessful, please try the update process again and follow the instructions. If you continue to have problems please contact your reseller or Centrepoint Technologies.

Firmware updates will not alter your system configuration. In the event of a major system update, it may be necessary for the configuration file to be reset to default values. In this case you will need to reconfigure the entire system. In the case of a major system update, Centrepoint Technologies will mention any issues involved with the firmware update.

Under no circumstances should you use mismatched software and firmware versions. The last two digits of the version number for the software and firmware should always match (ie. 1.37 software and 2.37 firmware). If you use mismatched software and firmware to configure your system, this could result in a system failure requiring system defaults to be reset and the system reconfigured.

If you replaced your computer with a new one, please use the software that matches the latest version of firmware running on TalkSwitch. If obtained from the website, you can once again download the install file. All install files found on the website have both the entire software program and the latest firmware. They are not simply upgrade files.



Step # 4 - Updating multiple units on a LAN

Several key steps should be followed if you want to successfully update multiple units that function on a LAN.

1. Disconnect all units from the LAN.
2. In order to avoid complications, we also recommend that you cease all function of the system (ie. disconnect the line cables). If you do the update during your off-peak hours, this will minimize disruptions to the company's operations.
3. Connect a TalkSwitch unit (they can be done in any order) to your PC running the new software you have installed. You can connect either by Serial or USB port. Updates cannot yet be done via the Ethernet port.
4. The final step in the upgrade process is to open the TalkSwitch software and select 'Flash Upgrade' from the main splash screen. A screen will appear warning you not to interrupt the update process once it has begun. Click on the "Yes" button to proceed. A second screen will then appear asking you to select the appropriate update (.bin) file. If you see more than one .bin file, select the most recent file (the one with the highest number). The file should look something like this: T237NS01
5. Highlight the newest firmware file, then click the "Open" button.
6. The final stage of the update process will take approximately 3 minutes, during which time the LED lights on TalkSwitch's front panel will be solid for part of the update, then the Data light will flicker for the remaining portion of the update.
7. When the update is complete, you will see a message indicating the update was successful. Click the "OK" button and the TalkSwitch software will then close. There is no need to restart Windows or TalkSwitch.
8. Repeat steps 3 to 7 for each of the units.
9. Reconnect all units back to the LAN then reconnect any lines or extensions previously disconnected for the update process.

In the event the firmware update was unsuccessful, please try the update process again and follow the instructions. If you continue to have problems please contact your reseller or Centrepoint Technologies.

Appendices

Appendix A - Help & Troubleshooting

Appendix B - Using TalkSwitch with Telephone Company Calling Services

Appendix C - Quick Commands and DTMF Functions

Appendix D - Safety Precautions and Regulatory Information

Appendix E - TalkSwitch One Year Warranty

Appendix F - Return Policy

Appendix G - Specifications

Appendix H - TalkSwitch and Power Interruptions

Appendix A - Help & Troubleshooting

If you are having problems with the configuration or operation of TalkSwitch, please check the Troubleshooting section starting on this page. If you don't find the solution to your problem, next try checking the FAQ section located under the Support area at our website: www.talkswitch.com/support.

If you cannot resolve your problem and require further assistance, you can do one of the following:

1. Contact your TalkSwitch reseller.
2. Contact our Customer Support department by e-mail: help@talkswitch.com.
3. Ask for a 'Technical Support Specialist'. If you would like to speak with a Technical Support Specialist, call Centrepoint Technologies at (613) 725-2980 weekdays between 9:00 a.m. and 5:00 p.m. EST.

Please have the following information available when you call:

a) Your e-mail address and telephone number.

b) The serial number located on the bottom of TalkSwitch and your date of purchase.

c) The number of telephone lines that you have connected to TalkSwitch.

d) The telephone company services that you are using with TalkSwitch.

e) Your PC's operating system (e.g.Windows 95, 98, ME, 2000 etc.)

Troubleshooting

This section of the manual is designed to help you quickly resolve problems that can be experienced by new TalkSwitch users. The problems and their corresponding solutions are organized in the following manner.

1. Problems that can occur when installing the Configuration software.
2. Problems that can occur during Configuration.
3. Problems that can occur while using TalkSwitch's features.
4. Problems that can occur with 2 or more units networked

Before examining the 'Problems', review these common installation checks first!

The first things you should check

1. Check that your telephone cables are connected to a wall jack at one end and TalkSwitch at the other. Ensure the devices you are using as TalkSwitch extensions (phones, faxes, etc.) are plugged into the extension jacks located on the back panel of TalkSwitch. (Do not plug your extensions directly into a wall jack.)
2. Check the Serial cable or USB connection between TalkSwitch and your PC.
3. Ensure that TalkSwitch's power adapter is plugged into a working power outlet and that TalkSwitch is turned on. Please make sure that you are using the power adapter that was provided with TalkSwitch. This is a unique adapter and it cannot be substituted with any other adapter. If your adapter appears to be defective, please contact your reseller to order the proper replacement adapter.

4. If networked, ensure that you have the networked firmware loaded. Select 'Configure' then on the 'About TalkSwitch' page, click on the 'View Details' button in the upper right corner of the screen. All units listed should have the same firmware version with an 'N' at the end of the version number.

Diagnostic codes for the lights flashing on the front panel of TalkSwitch

Line 1,2,3,4 lights flashing simultaneously: The Unit ID of this TalkSwitch is in conflict with another TalkSwitch unit on the same LAN. Make sure you assign a different Unit ID to each TalkSwitch unit.

Line 2 and 3 lights flashing simultaneously: There is a file system error. To fix the problem, reboot TalkSwitch. It will do a file system check and fix any problems encountered. If this does not resolve the problem, contact your reseller.

Line 1 and 4 lights flashing simultaneously: There is a voice mailbox error. To fix the problem, reboot TalkSwitch. It will do a file system check and fix any problems encountered.

Line 3 and 4 lights flashing simultaneously: Firmware not loaded or corrupted error. To fix the problem, reload the TalkSwitch firmware. Make sure you update with the last version you updated with. Do not use an old version off the install CD if you have updated your system at least once.

Line 1 and 4 then Line 2 and 3 lights flashing alternately: System prompts not loaded or corrupted error. To fix the problem, reload the TalkSwitch firmware. Make sure you update with the last version you updated with. Do not use an old version off the install CD if you have updated your system at least once.

Problems that may occur during Configuration

Problem: I am not able to "Retrieve settings" from my TalkSwitch.

- Make sure your TalkSwitch is turned on and plugged into a working power outlet. Then select "Retrieve settings", available under the File menu in the Configuration Software.
- Make sure the serial or USB cable connecting TalkSwitch and your PC is securely attached to the serial ports. "Retrieve settings", available under the File menu in the Configuration Software. Confirm that TalkSwitch is set to use the proper port. For USB, dial # 9 1 # at a Local Extension then you should hear the prompt "Accepted". Next, reset TalkSwitch. For Serial, dial # 9 0 # at a Local Extension then you should hear the prompt "Accepted". Next, reset TalkSwitch. **USB is not supported for Windows 2000 or XP.
- From the Control Center, choose 'PC Connection' and then select COM Port. Ensure that the Configuration Software is using the correct port to communicate with TalkSwitch. Then select "Retrieve settings", available under the File menu in the Configuration Software.
- Try 'resetting' TalkSwitch (turn the power off and then back on). Then select "Retrieve settings", available under the File menu in the Configuration Software. This will often correct any 'miscommunication' that may have occurred between TalkSwitch and your PC.
- Make sure you do not have any other communications programs running at the same time you want to use the TalkSwitch configuration software. These may include Palm Pilot, Hot Sync, TalkWorks, Digital Camera software. These programs tend to 'hold' onto COM ports and not make them available for any other programs.

Problem: I am unable to configure TalkSwitch using a touchtone phone and the Keypad Commands.

- TalkSwitch cannot be configured using a phone connected in parallel to TalkSwitch.
- If you are trying to configure TalkSwitch using an Out-of-Office phone, you must first enter Command Mode. If you have enabled password protection, you must also first enter the correct password.
- If you are trying to configure TalkSwitch using a Local Extension, make sure the extension has not been given 'Direct Access' to your telephone lines. If so, you will have to dial flash 4 to receive internal dialtone.
- If the TalkSwitch configuration software is open, you cannot configure TalkSwitch using DTMF. If the software is closed and you continue to get the prompt "I'm sorry, TalkSwitch is currently being configured." Try resetting TalkSwitch. It is possible that the software did not close properly and as a result TalkSwitch still thinks it is in 'configuration mode'.

Problems that may occur while using TalkSwitch's features

The Auto Attendant:

Problem: The Auto Attendant does not play when calls come in.

- Make sure you have recorded the Auto Attendant message.
- Check your Call Handling settings for the 'Auto Attendant answers' number of rings. It may be that the number of rings after which the Auto Attendant is set to answer calls is set too high.
- Check what mode TalkSwitch is currently running. It is possible that you are in Mode 2 and have not configured TalkSwitch properly for this mode. Check what you have programmed for Mode 2 in the Telephone Lines section under 'Call Handling'.
- The line is not connected properly to TalkSwitch. Check to see that the line light associated to the line ringing in is flickering. If not try replacing the phone cord.

Problem: The Auto Attendant message is broken up or very faint.

- Adjust the Auto Attendant Playback volume setting located in the Audio Controls tab in the Options folder of the Configuration software.
- The quality of the microphone in the telephone handset that you are using to record your Auto Attendant also affects the quality of your recording. Try recording the Auto Attendant using another extension/telephone.

Problem: The Auto Attendant answers calls before any of the extensions ring.

This is a problem for those TalkSwitch users who wish to have their Local Extensions ring before the Auto Attendant picks up incoming calls.

- Check the 'Extensions to ring' column in the Telephone Lines tab in the 'Call Handling' folder. It may be that the number of rings after which the Auto Attendant is set to answer calls is set too low.

Problem: The Auto Attendant is transferring calls to the wrong extension.

- Verify which extension jacks your devices (phones, faxes) are attached to.

Problem: The Auto Attendant answers calls, but does not transfer them to the extensions.

- Make sure your extensions are plugged into the extension jacks on the back panel of TalkSwitch (instead of your telephone wall jacks).
- Check your settings in the Auto Attendant page. Are all the options pointing to the correct extensions or other options?

Music-on-Hold:

Problem: Callers hear music and 'ringing' when the Auto Attendant transfers their call to an extension.

- You have an audio device plugged into TalkSwitch, but have not enabled (turned on) the Music-on-Hold feature found on the Auto Attendant tab in the Call Handling folder.

Problem: Callers hear music and a beeping sound when put on hold at an extension.

- You have an audio device plugged into TalkSwitch, but have not enabled (turned on) the Music-on-Hold feature found on the Auto Attendant tab in the Call Handling folder.

Problem: Callers hear a 'Please Hold' message and then total silence when the Auto Attendant transfers their call to an extension.

- You have enabled (turned on) the Music-on-Hold feature, but have not attached an audio device to TalkSwitch.

Problem: Callers hear only silence when put on hold at an extension.

- You have enabled (turned on) the Music-on-Hold feature, but have not attached an audio device to TalkSwitch.
- Make sure you use the 'Flash' or 'Link' button to put callers on hold. If you use the 'Hold' button on your phone, callers will be placed on hold at the phone and since TalkSwitch didn't receive a signal to indicate a caller is to be placed on hold, no music can be played.

Problem: Sometimes callers do not hear Music-on-Hold .

- Make sure you have a music source connected to the MUSIC jack at the back of each TalkSwitch unit connected to the LAN.

Call Routing with Local Extensions and Home Phones (Transfer and Intercom):

Problem: Callers are disconnected when transferring calls from one extension to another.

- It is possible that if you are using the hookswitch to put callers on hold rather than a Flash button, you may be holding the hookswitch down too long, and as a result are actually hanging up on the caller.

Problem: I can't use my Conference / 3-Way Calling feature from the phone company.

- You need to make sure you have checked the box indicating that you have 3-Way Calling on the appropriate lines. This option is located on the Telephone Lines page in the 'System Information' folder of the configuration.

Problem: Unable to place intercom calls from a Local Extension.

- You can not use a Local Extension that has been given 'Direct Access' to your telephone lines for intercom calling. To change this setting, go to the Local Extension configuration tab and make the necessary adjustment by giving access to a Line Hunt Group or dial Flash to get internal dial tone.

Answering and Fax Machines:

Problem: The answering machine and/or fax machine picks up calls before they can be answered by telephone extensions.

- Check your settings in the Telephone Lines tab in the 'Call Handling' section in the Software Configuration. The problem may be that your fax machine/answering machine extension is set to answer calls at the same time as your telephone extensions. To fix this problem, click the "Adjust sequence" button and set the slider bars for your telephone extensions so that they will ring a few times before your fax/answering machine begins ringing.

Problem: Incoming faxes are not automatically detected and routed to the fax machine.

On the Auto Attendant tab of the configuration software, check to ensure that you have chosen the appropriate extension for the field labeled 'if a fax call is detected'.

- Not all fax machines emit a CNG tone that TalkSwitch can detect and route. Therefore, it is wise to consider incorporating an additional method of fax routing. This may include the use of a distinctive ring number or giving the caller the option to select the fax extension.
- On average, fax machines/modems will 'time out' or disconnect after 20 seconds if they have not connected with another fax machine/modem. If you are using the 'User does not make a selection' option to route incoming faxes, the fax call may 'time out' before it reaches your fax extension. If your Auto Attendant is lengthy, you may want to shorten it or use another fax routing option.
- The level of the Auto Attendant is too loud and as a result is overpowering the CNG tone effecting detection. You may want to lower the volume level of the Auto Attendant.

Other Possible Local Extension Problems:

Problem: I am unable to access TalkSwitch's Lines with a Local Extension.

- Check your 'Direct Line Access' settings on the Local Extension page under 'System Information' of the Software Configuration. If a Local Extension has not been given 'Direct Access' to your telephone lines, you must dial (81-88 or 9) to access one of TalkSwitch's Lines.

Problem: My PC attached (Internal or External) Modem cannot dial out.

- If the extension to which your Modem is attached has not been given 'Direct Access' to telephone lines, you will have to include a Line Hunt Group prefix (81-88 or 9) before the number you are dialing. For more information about Dial Out Access and changing your Modem's dial properties, see section 3.2.9, "External modem telephone line access".
- You may have to change your Modem's properties so that it waits for a 'dial-tone' before it begins dialing your Dial Up Networking number. For more information about changing your Modem's properties, see section 3.2.9, "External modem telephone line access".

Problem: One of the Local Extensions (telephones) does not ring.

- Some telephones require more 'voltage' in order to ring. These phones are usually the older 'Bell' phones that have mechanical ringers. These phones are simply too much of a load for TalkSwitch and should not be used as an extension.
- Make sure the telephone cord you are using between the phone and TalkSwitch is working properly. Also, check to make sure the ringer is turned on for your phone.

Problem: Extension(s) ring, but there is no caller.

- This can occur when a caller hangs up after the Auto Attendant has begun to play. In some areas, the Telephone Company's 'disconnect/clear' signal is weak. This is the reason the Auto Attendant may not pick up the disconnect signal right away when a caller hangs up. Because the Auto Attendant will receive no response after playing its message, the call will fall through to your settings for the 'User does not make a selection' option associated with that Auto Attendant.

Problem: When I try to access voicemail, I hear a busy tone.

- Check your 'Direct Line Access' settings on the Local Extensions page under 'System Information' of the Software Configuration. If a Local Extension has been given 'Direct Access' to your telephone lines, you must first dial 'Flash' before dialing the mailbox. The same applies for dialing other extensions to initiate intercom calls.

Problems that may occur with 2 or more TalkSwitch units connected to the same LAN.

Problem: I can't reach an extension across the LAN

- Make sure the other unit is connected to the LAN and powered on.
- Pick up a Local Extension belonging to the other unit. If there is dialtone, then check your LAN connections. On the rear panel, the top LED of the 3 LEDs next to the LAN port should be on. If there is no dialtone, then make sure the unit is powered on.

Problem: The configuration does not show the 2nd TalkSwitch unit

- Check your LAN connections. Are you able to communicate with another extension on the other unit?
- Check the Unit ID of each unit. If the lights on one or more units are flashing, then there is a conflict with the Unit ID numbers assigned to each TalkSwitch unit. Connect a phone to each TalkSwitch unit and lift the handset. It will tell you immediately if a Unit ID number needs to assigned. Follow the instructions accordingly. You can dial #00# at anytime to check the Unit ID of the unit you are connected to.

Problem: After recording an Auto Attendant greeting, I can't play it back.

- After recording an Auto Attendant on one of the TalkSwitch units, it will then copy the Auto Attendant to any other TalkSwitch units on the LAN. During this process, you cannot listen to that particular Auto Attendant. Try again in a few minutes.

Problem: Calls are not always reaching my voicemail.

- In extreme cases when the system is in high use, all channels across the LAN might be in use so calls cannot be transferred to extensions or voicemail. If this situation appears to be happening frequently, you may want to consider optimizing how the system uses lines. In the Line Hunt Groups section of the software we recommend that you enable the 'Hunt lines on same unit first' option. Also try to keep a proportionate number of lines connected to each TalkSwitch that properly matches the number of extensions connected (extensions that are actually used frequently).

Example: You have 2 TalkSwitch units, 6 lines and 12 employees. The 6 lines have the Hunt/Rollover service from the phone company.

Suggested setup:

Plug the 4 highest traffic lines into unit 1. Also connect the 8 highest phone usage employee extensions to unit 1. Next, connect the remaining lines and extensions to unit 2. Make sure you leave the 'Hunt lines on same unit first' option enabled in the Line Hunt Group section of the software. This arrangement keeps most of the traffic on unit 1 and any outbound calls made from any extension will most of the time go out on the same unit the extension is connected. The same will apply for inbound calls forwarded to Remote Extensions. The call will be forwarded out on a line belonging to the same unit that the call came in on. If a line on that unit is unavailable, then the call will be forwarded out on a line on the other TalkSwitch unit.

Problem: Calls across the LAN are lower in volume

- Check the line gain levels on the Audio Controls page located in the 'Options' folder in the TalkSwitch configuration. You may need to boost the Line gain levels on one or more lines to compensate for high loss lines. Take note that if these controls are set improperly and your lines are problematic, you may hear an 'echo' effect when calls are made across the LAN.

Appendix B - Using TalkSwitch with Telephone Company Calling Services

Many of the calling services offered by your local telephone company are compatible with and enhanced by TalkSwitch's capabilities.

Caller ID (Call Display) - Displays the telephone number and name associated with an incoming call.

TalkSwitch is capable of regenerating the Caller ID and passing the information to its Local Extensions when incoming calls are transferred by the Auto Attendant. TalkSwitch regenerates the Caller ID and passes it only to the selected Local Extension. If a Local Extension is configured to ring at least twice before the Auto Attendant answers, TalkSwitch will pass the Caller ID information to that extension. If a call is transferred from one extension to another, the Caller ID information will also be passed. TalkSwitch can also use the Caller ID's time stamp to set it's internal clock.

Distinctive Ring - The ability to have more than one telephone number that callers can dial to reach the same telephone line. (Distinctive Ring is also referred to as: Ident-A-Ring, Ident-A-Call, Ring Master, Teen Service, Double Number, Personal Ringing, Ring Plus, Smart Ring Service, Special Ring or Customized Ringing.)

TalkSwitch can detect Distinctive Ring telephone numbers and use them to route incoming calls automatically. TalkSwitch gives you the ability to use two Distinctive Ring telephone numbers on all lines. Distinctive Ring numbers on TalkSwitch's Lines also have access to the Auto Attendant and all of TalkSwitch's other call routing features.

TalkSwitch's Distinctive Ring call routing features can be used a number of ways. Routing fax/modem calls, routing voice messaging, separating home/office calls, and making use of TalkSwitch's Auto Call Back feature. Each Distinctive Ring number has a 'distinctive' ring cadence or ring sequence, which allows you to identify the telephone number that was dialed.

Voicemail (Call Answer) - A service which gives callers the opportunity to leave a message when your phone line is busy or unanswered.

TalkSwitch can work in conjunction with your telephone company's Voicemail Service.

Call Waiting - If you are already on the phone, the Call Waiting service will emit a soft beeping sound to let you know you have another call waiting to be answered.

To talk to the other caller when you hear a Call Waiting beep, press the Flash button twice. To return to the other caller, you will need to press the Flash button twice again. This service is not recommended since TalkSwitch cannot handle the second call while the first call is already being routed by the Auto Attendant.

3-Way Calling/Conference - The 3-Way Calling/Conference service allows you to add a third party to a call already in progress.

The 3-Way Calling/Conference service enhances TalkSwitch's capabilities whether you have 1 or more telephone lines. Using only one telephone line with 3-Way Calling/Conference service , gives you access to TalkSwitch's Call Forwarding, Call Back and Call Bridge features.

Centrex/Plexar Transfer - The Centrex Transfer service is similar in function to the 3-Way Calling/Conference service. The primary difference is that two external parties can still remain in conversation even after you hang up. TalkSwitch does not disconnect after the transfer since we need to track the call progress.

Using only one telephone line with Centrex Transfer service gives you access to TalkSwitch's Call Forwarding, Call Back and Call Bridge features.

Hunt or Rollover - When using two or more lines, calls coming in on a busy line can be "rolled over" to an available line in a "hunt" pattern that you can set. There are two types of hunting - Sequential and Circular. Sequential hunting starts at the number dialed and ends in the last number in the assigned group. Circular hunting hunts all the lines in the hunting group, regardless of the starting point. (It will only circle once through the Hunt Group).

TalkSwitch has the same functionality available on all lines and therefore can work in conjunction with the Hunt and Rollover services.

Call Hold and Flash

TalkSwitch uses 'Flash' to put calls on hold. A Flash signal is produced by pressing the 'Flash' or 'Link' button on your telephone (Link is another name for Flash). If you do not have these buttons on your telephone, you can produce a 'Flash' by quickly depressing and releasing the telephone's 'Hangup Hook' or 'Hook Switch'.

Single Flash - is pressing the 'Flash' or 'Link' button once. You can also depress and release the telephone's 'Hangup Hook' or 'Hook Switch' once.

Double Flash - is pressing the 'Flash' or 'Link' button twice. You can also depress and release the telephone's 'Hangup Hook' or 'Hook Switch' twice. When using your telephone's 'Hangup Hook' to initiate a 'Double Flash', do not try to initiate the second Flash too quickly or you may lose or 'disconnect' your caller. Press and release the 'Hangup Hook' once, count to '2', then initiate the second Flash.

When would you use double flash?

1. If TalkSwitch is connected to any other system/service that uses 'Flash' to activate its features (e.g. a Key Telephone System, PBX, or telephone line with the Centrex service from your phone company).
2. If you are using any of your local telephone company services that are activated with 'Flash' (e.g. Call Waiting, 3-Way Calling/Conference, etc.).

What does Single and Double Flash do?

TalkSwitch and the above-mentioned systems/services use 'Flash' to activate their calling features. TalkSwitch therefore needs a way to tell which (or whose) features you want to access when you press the 'Flash' button.

Using a 'Single Flash': places the caller on hold. (The Flash is not passed to the CO line, solving problems associated with Flash causing a hang-up at some COs).

Using a 'Double Flash': first Flash places the caller on hold, and the second Flash (if pressed within 2 seconds) tells TalkSwitch to pass a Flash to the CO line to activate the CO or PBX intended feature.

Appendix C - Quick Commands and DTMF Functions

These DTMF Quick Commands can be dialed from a Local Extension or an outside telephone at the Auto Attendant. To enter Command mode, dial # at a Local Extension or at the Auto Attendant. If you are requested to enter a password, enter the Administrator password. Next, enter any command followed by the # sign.

Command	Action
00	TalkSwitch tells you the Unit ID of the unit you are connected to.
0x	Assign Unit ID 1 - 4 to TalkSwitch (x = 1 to 4)
30	TalkSwitch tells you which mode it is currently using
3x	Switch Modes (x = 1or 2)
4x	Record Auto Attendant (x = 1 to 9)
04x	Erase Auto Attendant messages (x = 1 to 9)
5x	Playback Auto Attendant messages (x = 1 to 9)
61 - 64	Record Auto Call Back Announced Messages 1 - 4
65	Record Prompted Call Back Announced Message
061 - 064	Erase Call Back Announced Messages 1 -4
065	Erase Prompted Call Back Announced Message
71 - 74	Playback Auto Call Back Announced Messages 1 - 4
75	Playback Prompted Call Back Announced Message
90	Set to Serial connection mode (default)
91	Set to USB connection mode
2xx 8<phone number>	Enter Remote ext. (2xx) phone number
2xx 980 0	Enter Remote ext. (2xx) Turn off “Same Line Connect”
2xx 980 1	Enter Remote ext. (2xx) Turn on “Same Line Connect”
2xx 9 <Hunt Group>	Enter Remote ext. (2xx) “Connect using:” Hunt Group (Hunt Group = 9, 81-88)
1xx 61	Enable ‘Do not Disturb’ at the Local Extension
1xx 60	Disable ‘Do not Disturb’ at the Local Extension

DTMF descriptions dialed from a Local Extension.

DTMF	Function performed	Notes
1x1-1x8	Intercoms a Local Extension	Direct dial from dialtone. x represents the Unit ID
119	Reserved	Direct dial from internal dialtone.
2x1-2x8	Dials a Remote Extension (associated with an external phone number).	Direct dial from internal dialtone. x represents the Unit ID
300-309	Dials an Extension Ring Group - 10 in total for the entire system. Mapped to local extension(s), with specific fall through options.	Direct dial from internal dialtone.
<flash> if connected to a caller	Puts caller on hold.	After putting a caller on hold, you receive internal dialtone.
<flash> at internal dialtone	It retrieves the most recent caller put on hold.	To retrieve the caller on hold for the most time, dial 7 at internal dialtone
<flash> at external dialtone	Switches to internal dialtone. Used mainly when an extension has Direct Line Access enabled.	Dialed when connected to an outside line.
*1x1-1x8 *2x1-2x8 *4x0-4x9	Dials into a voice mailbox.	To transfer a caller to a mailbox, press 'flash' to place a call on hold, then *1x1-1x8, *2x1-2x8, or *4x0-4x9 and hang up. x represents the Unit ID
**1x1-1x8 **2x1-2x8 **4x0-4x9	Internal voicemail retrieval/access.	Direct dial **1x1-1x8, **2x1-2x8, or **4x0-4x9 from internal dialtone to retrieve voicemail. x represents the Unit ID
<flash>4	Completes a transfer and returns to internal dialtone	Action performed after putting a caller on Hold then dialing an indented destination.
*0	External P.A. Access	Direct dial *0 at dial tone to make an announcement through the attached external P.A. system.

DTMF	Function performed	Notes
<flash>5	Disconnects current caller and reconnects immediately to the last caller put on hold.	Action performed after putting a caller on Hold and dialing an intended destination.
*500-509	Call Parking Spaces - 10 in total for the entire system.	Press 'flash' to place a call on hold, then assign a parking space *500-509.
**500-509	Parked Call Retrieval	Direct dial **500-509 from dial tone to pick up a parked call.
<flash>6	Conference Call for 3 parties.	Press 'flash' to put the first caller on hold, dial another extension or external number, then press 'flash' 6.
*61	Enables 'Do Not Disturb' at the current extension	Direct Dial *61 at a local extension. User will hear confirmation. Reminder is played every time the extension is picked up.
*60	Disables 'Do Not Disturb' at the current extension.	Direct Dial *60 at a local extension. User will hear confirmation.
*7 + 1xx	Call Pick up - Extension Specific	Direct dial from dial tone to pick up a call ringing at another extension at anytime including after the Auto Attendant answers.
<flash>7	Hold Retrieve - used for retrieving any calls placed on hold at that extension.	Direct dial from dial tone or by pressing 'flash' then 7 to cycle through on a first in / first out basis.
80	Accesses Same Line Connect when transferring an outside caller to another outside number.	Put the caller on Hold, dial 80, and then dial the outside number. Hang up to complete the transfer. Can only be used when the line has 3-Way Calling/Conference or Transfer (Centrex/Plexar) service.
81-88, 9	Line Hunt Groups used to access a line.	Direct dial from dial tone.
*8	Play music source through PA output	Direct dial from dial tone to toggle on or off music through the PA port. Useful for office background music.
*9	Call Pick up	Direct dial from dial tone to pick up a call ringing at any other extension.
#	Enters command mode	Direct dial # at a Local Extension

If you have Direct Line Access enabled at your Local Extension, then you must first press 'flash' before using most of the functions listed.

DTMF descriptions dialed at the Auto Attendant message

Digit dialed	Function performed
0	User Defined - Mapped to an Extension, Ring Group, Auto Attendant, Voice mailbox, Announcement or perform no action.
1x1-1x4 1x1-1x8	Dials Local Extensions The extensions are 1x1-1x4 for the TalkSwitch 24 and 1x1-1x8 for the TalkSwitch 48. x represents the Unit ID number.
2x1-2x8	Dials Remote Extensions associated with an external phone number. Functionality similar to a Local Extension. x represents the Unit ID number.
300-309	Dials Extension Ring Groups - 10 in total for the entire system. Mapped to Local Extensions(s), with specific fall through options.
1,2,3,4,5	User Defined - Mapped to an Extension, Ring Group, Auto Attendant, Voice mailbox, Announcement or Perform no action.
6	Enters Call Back configuration.
7(xxx...)	PBX Transfer - A flash hook transfer with disconnect after dialed.
81-88, 9	Access to line Hunt Groups for Call Bridge - Password protected at the Auto Attendant.
80	Call Bridge using Same Line Connect. Requires 3-Way Calling/Conference on the line.
*1x1-1x8 *2x1-2x8 *4x0-4x9	Enter Internal voicemail to leave a message or listen to an announcement. x represents the Unit ID number.
**1x1-1x8 **2x1-2x8 **4x0-4x9	Internal voicemail retrieval/access. x represents the Unit ID number.

Appendix D - Safety Precautions and Regulatory Information

Safety Precautions

Before using TalkSwitch, please review and ensure the following safety instructions are adhered to:

1. Read, Follow and Retain Instructions - All safety and operating instructions should be read before operating the equipment, followed and retained for future reference.
2. Heed Warnings - All warnings on the equipment and in the operating instructions should be adhered to.
3. Do not operate in environments where the temperature is below 0 degrees Celsius or 32 degrees Fahrenheit. If the product was shipped in cold weather, please let the system warm up at room temperature for at least 2 hours before plugging it in to a power outlet.
4. Moisture - Do not place TalkSwitch in a high humidity environment.
5. Heat - Never place TalkSwitch near heat sources such as radiators, floor registers or direct sunlight.
6. Power Supply - The equipment should only be connected to an approved power supply of the type described in the operating instructions or marked on the equipment. Use only the power adapter supplied with TalkSwitch.
7. Damage requiring service - Do not attempt to service the TalkSwitch yourself. Unplug TalkSwitch and refer servicing to a licensed technician when:
   - The plug or power cord has been damaged.
   - TalkSwitch has been exposed to moisture.
   - TalkSwitch does not appear to be operating properly or exhibits a marked change in performance.

Important Notices

FCC and IC Warnings

This equipment complies with Part 15 and 68 of the Federal Communications Commission (FCC) rules in the United States. It also complies with regulations RSS210 and CS-03 of Industry Canada and Science Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC Part 15:

NOTE: This equipment has been tested and found to comply with the limits for a "CLASS B" Digital Device pursuant to Part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different to that which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

► This CLASS B Digital apparatus meets all requirements of the Canadian interference-causing equipment regulations.

► Changes or modifications not expressly approved by Centrepoint Technologies Inc. could void the user's authority to operate the equipment.

FCC Part 68:

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee that the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

► Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

A label is located on the underside of the base unit containing both the FCC registration number and Ringer Equivalency Number (REN) or the IC registration number and Load Number. You must, upon request, provide this information to your local telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local Telephone Company.

► This equipment is compatible with inductively coupled hearing aids.

Service

Should you experience trouble with this telephone equipment, Model: CT-TS01, for repair or warranty information please contact your reseller. See Appendix E, ''TalkSwitch One Year Limited Warranty'', for more information.

If the equipment is causing harm to the telephone network, the Telephone Company may request that you disconnect the equipment until the problem is corrected.

This equipment cannot be used on public coin telephone services provide by the telephone company. Connection to party line service is subject to state tariffs.

The FCC requires that you connect your cordless telephone to the nation-wide telephone network through a modular telephone jack (USOC, RF11C, RJ11W, or RJ14).

Your telephone company may discontinue your service if your equipment causes harm to the telephone network. They will notify you in advance of disconnection, if possible. During notification, you will be informed of your right to file a complaint to the FCC.

Occasionally, your telephone company may make changes in its facilities, equipment, operation, or procedures that could affect the operation of your equipment. If so, you will be given advance notice of the change to give you an opportunity to maintain uninterrupted service.

Fax Branding

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or any other electronic device, including Fax machines and Fax modems, to send any message unless such message clearly contains a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

Appendix E - TalkSwitch One Year Warranty

The Original end-user purchaser acknowledges that he or she has read the limited One-Year Warranty and Warranty Disclaimers and understands the same and agrees to be bound by its terms and conditions.

Centrepoint Technologies Inc. warrants to the original end-user purchaser that TalkSwitch meets applicable specifications (as set forth in the product descriptions in the technical manuals) and to be free from defects in materials and workmanship for a period of one year from the date of purchase (proof of purchase required). If Centrepoint Technologies receives notice of such defects, Centrepoint Technologies will, at its discretion, either repair or replace products that prove to be defective.

The above warranty shall not apply to defects resulting from improper or inadequate maintenance, installation, end-user supplied software or interfacing, modifications or attempted modifications, misuse, damage from corrosive environments, moisture, shipping, high voltage surges from external power sources such as power line, telephone line or connected equipment, or operation outside of the specifications for the product. This warranty is not valid when the product is sold by the original 'end-user' purchaser or to any product with an altered or defaced serial number.

Incidental and consequential damages caused by malfunction, defect, or otherwise and with respect to breach of any expressed or implied warranty are not the responsibility of Centrepoint Technologies Inc. and to the extent permitted by law, are hereby excluded both for property and to the extent not unconscionable, for personal injury or damage.

In no event will Centrepoint Technologies be liable to the user for damages, including any lost profits, lost savings or other incidental or consequential damages arising out of or inability to use such product, even if Centrepoint Technologies or an authorized Centrepoint Technologies dealer has been advised of the possibility of such damages, or for any claim for any other party. In any event, the liability of Centrepoint Technologies shall not exceed the purchase price of the product.

There is no assumption of liability as a consequence of any of the following events:

1. Shipment to or from Centrepoint Technologies Inc. or the customer; and
2. Forces beyond the control of Centrepoint Technologies Inc. including, but not limited to, an act of God, war, insurrection, civil disturbances, natural disasters, labour disputes or government regulations.

The original 'end-user' purchaser's sole and exclusively remedy hereunder shall be limited to repair or replacement specified herein.

DOC Compliance

This digital apparatus does not exceed the Class B limits for radio noise emissions for digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

The FCC Statement is located in Appendix D, ‘‘Safety Precautions and Regulatory Information’’.

Warranty Service

To be eligible to obtain warranty service you must retain proof of purchase and contact your reseller for warranty details. If you fail to provide proof of purchase, your reseller and Centrepoint Technologies will not be able to provide you with any kind of warranty service.

To obtain warranty service, products must be sent to your reseller or a service facility designated by Centrepoint Technologies. The original end-user purchaser shall pay all shipping charges, duties and taxes for products sent to Centrepoint Technologies for warranty service. Centrepoint Technologies shall pay for return of the product to the end-user purchaser.

To obtain Warranty service:

1. Contact your reseller and obtain a Warranty Return Authorization (WRA) number if required. If you purchased the product directly from Centrepoint Technologies, you can obtain this number by contacting the Technical Support department at Centrepoint Technologies (613) 725-2980. Please have your model and serial number available when you call.
2. Include a copy of your proof of purchase and a written explanation of the problem; this will enable us to expedite your repair.
3. Attach the shipping label to the exterior of the package.
4. On the shipping label, be sure to include the WRA number obtained from Centrepoint Technologies or your reseller.
5. Ship the product (prepaid) to your reseller. In the case of the product being purchased from Centrepoint Technologies, send the unit in it's *original or better protective packaging* to:

Centrepoint Technologies
1545 Carling Ave. Suite 510
Ottawa, Ontario
K1Z 8P9
Canada

If the product is being shipped from outside of Canada, the following statement must be included on the package. **'Canadian Goods Being Returned to Canada'.**

Failure to include the information indicated above will result in the package being refused.

Appendix F - Return Policy

Products purchased from a reseller:
Check with your reseller on the specific details regarding their return policy.

Products purchased directly from Centrepoint Technologies:
Contact Centrepoint Technologies for details regarding the return policy. For information regarding product servicing, please refer to the TalkSwitch One Year Limited Warranty. Centrepoint Technologies will not accept product returns outside of its return policy.

To Return products which were purchased directly from Centrepoint Technologies:

1. Obtain a Return Merchandise Authorization (RMA) number. You can obtain this number by contacting the Technical Support department at Centrepoint Technologies (613) 725-2980. Please have your model and serial number available when you call. *Products will not be accepted without an RMA number.*
2. Include a copy of your proof of purchase and a written explanation of the reason for the return; this will allow us to expedite your refund.
3. Attach the shipping label to the exterior of the package.
4. On the shipping label, be sure to include the RMA number obtained from Centrepoint Technologies.
5. Ship the product (prepaid and in it's original packaging) to:

Centrepoint Technologies
1545 Carling Ave. Suite 510
Ottawa, Ontario
K1Z 8P9
Canada

If the product is being shipped from outside of Canada, the following statement must be included on the package. **'Canadian Goods Being Returned to Canada'.**

Failure to include the information indicated above will result in the package being refused.

► **Important:** The Centrepoint Technologies Return Policy applies only for products purchased directly from Centrepoint Technologies. The Return Policy for products purchased from an authorized Centrepoint Technologies dealer is determined by the dealer (the retail outlet where the product was purchased). Please contact your retailer for information regarding their return policy; do not return the product directly to Centrepoint Technologies.

Appendix G - Specifications

Extension Interface

Loop range	0 to 600 ohms
On hook voltage	35 volts
Off hook loop voltage source	35 volts
Off hook loop current	23 to 40 mA
Ringing voltage	90 volts RMS
Ringing frequency	20 Hz - True Sine wave
Total supported ringing load	5 REN
Trunk type	Loop start
Connector type	RJ-11, 2 pin
Interface impedance	600 ohms
Dial tone level	-2.4 dBm
Signaling type	DTMF only
Flash hook supported	Yes

C.O. Interface

Interface impedance	600 ohms
Trunk type	Loop start
Connector type	RJ-11, 4-pin
Ringing impedance	3,900 ohms
Ringing sensitivity	45 volts RMS @ 20Hz
REN	1.8
Longitudinal balance	69 dB
Signal level	- 10 dB
Caller ID support	All lines
Distinctive ring supported	Yes

System

C.O. interfaces	2 / 4*
Extension interfaces	4 / 8*
RS-232, 9 pin interface	1
USB interface	1
LAN interface	Ethernet (10BaseT)
Memory expansion*	8, 16, 32, 64 MB TalkSwitch Memory Cards

System

Music input	Phono jack (mono)
P.A. output	Phono jack (mono)
Power source	AC wall adapter 120VAC/16VAC 2.0A
Power switch	Push Button
DTMF detectors	4 / 8* @ -3dBm to -30dBm
Dial tone generators	1
Ring detectors	2 / 4*
Power-failure pass through	Extension 4 connects to Line 1
Dimensions	(H) 51.6mm x (W) 203.2mm x (L) 213.4mm
Weight	0.675 kg / 0.930 kg*
Approvals	FCC parts 15 and 68 Industry Canada CS-03 EN 60950 - 1992, including: Amendments 1, 2, 3, 4, 11.

* Applies to TalkSwitch 48 models only.

Appendix H - TalkSwitch and Power Interruptions

TalkSwitch settings and configurations:

In the event of a power failure, your TalkSwitch settings and configurations will not be lost.

TalkSwitch's feature settings (configuration) are stored in an EEPROM. An EEPROM is a form of non-volatile memory. Non-volatile memory means that your feature settings (configurations) remain in TalkSwitch's memory despite interruptions in TalkSwitch's power supply.

Calling Features:

In the event of a power failure, no TalkSwitch features or capabilities will be available other than:

- Local Extension, 114, 124, 134 and 144 can make or receive calls on Line 1 of their respective units

In the event of a power return, all TalkSwitch features and capabilities will be re-established.

Mode Scheduling and Power Interruptions:

When the power supply to TalkSwitch has been interrupted, TalkSwitch's internal clock will continue to run for up to 12 hours. If you have enabled TalkSwitch's Automatic Mode Scheduling feature and it has been longer than 12 hours, TalkSwitch will not function properly until the internal clock is reset via a Caller ID call or with the TalkSwitch configuration software. When power is restored to TalkSwitch, TalkSwitch will check the time and determine the mode it should be in according to the configuration and set itself to that mode.

To check the current mode of operation, dial # at a Local Extension to enter command mode then enter a password if required. Next, dial 30 then #. TalkSwitch will report the current mode.

Glossary

* (Star/Asterisk Sign)
The character on the bottom left of your touchtone telephone keypad.

(Pound Sign)
The character on the bottom right of your touchtone telephone keypad. It is also commonly called the number sign.

3-Way Calling/Conference
A service provided by telephone companies which allows you to connect parties on three different telephone lines together for one conversation.

3-Way Conference Call
Connecting three parties together for one telephone conversation. TalkSwitch offers its own 3-Way Conference feature and also allows you to use the 3-Way Conference (Calling) service provided by local telephone companies.

Analog
All sound actually begins in the form of sine waves and must be in this form to be heard by the human ear. Analog devices (phones, answering machines, etc.) transmit and receive sound in the form of 'sine waves'. The telephone lines in your home are also designed to carry analog signals (sine waves). TalkSwitch is an analog device and will work with any other analog device or telephone system.

Auto Attendant Message
TalkSwitch's electronic attendant. A self-recorded message that greets and directs callers to select an extension number based on information provided in the message.

BPS
Bits Per Second. A measure of how fast a modem can transmit and receive data.

Call Back
A TalkSwitch feature which, once activated, instructs TalkSwitch to call you back at a preset Out-of-Office telephone number. You can then access TalkSwitch's Call Bridge feature. TalkSwitch offers two ways to activate Call Back - Prompted and Auto.

Call Bridge
A TalkSwitch feature which 'bridges' together calls from two different remote locations. Call Bridge allows you to place long distance calls from your office telephone lines even when you are out of the office.

Call Forward
A TalkSwitch feature which forwards calls to one of 10 or more Remote Extensions.

Caller ID
A service provided by telephone companies which transmits information about incoming calls (callers name and telephone number). The Caller ID information is transmitted between the first and second ring.

Call Waiting
A service provided by telephone companies which allows you to accept a second incoming call on a telephone line that is already in use. Call Waiting allows you to 'toggle' from one caller to the other.

Central Office

Your local telephone company or public exchange network.

Centrex/Plexar

Central Office Exchange Service. A type of PBX service offered by the telephone company on a 'pay per service' basis. All call switching occurs at a local telephone station instead of a company's premises.

CNG

A 'chirping' tone emitted by fax modems and most fax machines to initiate contact with another fax machine/modem.

CO

Central Office.

COM Port

Communications Port. Internal virtual pathways used to transmit data to and from a PC's exterior Serial Port and software running on the PC. The majority of PCs have four Com Ports: COM1, COM2, COM3, and COM4. Most software programs gain access to the Com Ports via system interrupts (IRQs) and only two IRQs are reserved for the four ports. If you have two devices using Com Ports that share an IRQ, you cannot use the devices simultaneously. Typically, COM1 and COM3 use IRQ4, while COM2 and COM4 use IRQ3.

Communications Software

Software that makes it possible to send and receive data over telephone lines via modems.

Compression (Data)

Storing information in a format that requires less space than usual. Compression saves transmission time, capacity and storage space.

Computer Telephony Integration

Refers to systems that enable a computer to act as a call center, accepting incoming calls and routing them to the appropriate device or person. Today's CTI systems, like TalkSwitch, are quite sophisticated and can handle all sorts of incoming and outgoing communications, including phone calls, faxes, and Internet messages.

Conference Call

Connecting three or more parties together for one conversation.

Configuration

The way a system is setup. For TalkSwitch the configuration is the collection of values or options you have chosen for each of TalkSwitch's features. Together, the settings for each of these features (The configuration) determine what TalkSwitch will do. TalkSwitch can be configured using the Configuration software or Telephone Keypad Commands.

Connector

The part of a cable that plugs into a port or interface to connect one device to another. Most connectors are either male or female.

CTI

Computer Telephony Integration.

Dialtone

A tone used by the telephone company to indicate to the user that the line is 'free' and available for making calls.

Dial Up Networking

A component in Windows 95/98 that enables you to connect your computer to a network via a modem.

Digit

Any whole number from 0 to 9. The numbers on your telephone keypad can also be referred to as digits.

Digital

Digital devices (phones, answering machines, etc.) convert analog sine waves into digital signals (a combination of zeroes and ones) for storage and/or transmission over digital lines.The digital signal is then converted back to analog sine waves, that can be heard by human ears.

Digitize

To translate into a digital form. For example, optical scanners digitize images by translating them into bit maps. It is also possible to digitize sound, video, and any type of movement. In all these cases, digitization is performed by sampling at discrete intervals. To digitize sound, for example, a device measures a sound wave's amplitude many times per second. These numeric values can then be recorded digitally.

Distinctive Ring

The ability to have more than one telephone number that callers can dial to reach the same telephone line. Each Distinctive Ring number has a distinctive ring cadence or ring sequence. TalkSwitch recognizes Distinctive Ring 1 as 2 short rings. Distinctive Ring 2 is identified as 3 short rings. (Distinctive Ring is also referred to as: Ident-A-Ring, Ident-A-Call, Ring Master, Teen Service, Double Number, Personal Ringing, Ring Plus, Smart Ring Service, Special Ring or Customized Ringing).

Driver

A program that controls a device. Every device, whether it is a printer, disk drive, or keyboard, must have a driver program. A driver acts like a translator between the device and programs that use the device.

DSP

Digital Signal Processing. Refers to manipulating analog information, such as sound or video that has been converted into a digital form.

DTMF

Dual Tone Multi-Frequency. The system used by touchtone telephones. DTMF assigns a specific frequency, or tone, to each key so that it can easily be identified by a microprocessor.

EEPROM

TalkSwitch's feature settings (configuration) are stored in EEPROM which is a form of non-volatile memory. This means that the feature settings (configurations) remain in TalkSwitch's memory despite interruptions in TalkSwitch's power supply.

Extended AT Commands

An extension of the standard AT Command Set that is specific to TalkSwitch. The extended command is indicated by an '!' (e.g. AT!|TS).

Extension (Local)

A Local Extension is any telephone or analog device (answering machine, fax, etc.) that is plugged into one of the 'Extensions' jacks located on the back panel of your TalkSwitch.

Extension (Remote)

A call forwarding number that can be any telephone number, in any location.

FCC

Federal Communications Commission. The FCC is the United States federal regulatory agency responsible for the regulation of interstate and international communications by radio, television, wire, satellite and cable.

Firmware

Firmware is a combination of software and hardware. More precisely, it is software (programs or data) that has been written onto hardware (micro-chips). Micro-chips (ROMs, PROMs and EPROMs) that have data or programs recorded on them are called firmware.

Flash button

A button on your telephone. Pressing the Flash button has the same effect as pressing the Link button or depressing and releasing the 'hang up' (switch) hook on a telephone. All of these actions will send a signal to TalkSwitch to put calls on or off hold.

Flash EPROM

TalkSwitch's firmware program (the programming code that operates TalkSwitch) is located on a 'Flash EPROM' chip. This means that the code operating TalkSwitch can be erased and reprogrammed (upgraded) without replacing the chip that contains the code.

Home phone

A home phone is any telephone using the same telephone line as one of TalkSwitch's Lines, but is not plugged directly into the back of TalkSwitch as an extension.

Icon

A small picture that represents a program, action or feature in the Configuration Software. When you click on an icon, that program, action or feature is activated.

Auto Call Back

Allows you to activate Call Back by dialing one of TalkSwitch's telephone numbers, letting the call ring at least once and then hanging up.

Intercom

A dedicated voice service within a specified user environment. TalkSwitch offers intercom capabilities between its Local Extensions.

Interface

Something that connects two separate entities. A user interface is the part of a program that connects the computer with a human operator (user).

Internet

A global network connecting millions of computers. Unlike online service networks (.com, .ca, .net, etc.) which are centrally controlled, the Internet is decentralized by design. Each Internet computer, called a host, is independent.

IRQ

Interrupt Request Line. Hardware lines found in PCs over which devices can send interrupt signals to the microprocessor. IRQs allow multiple devices attached to your PC to share the micro processors resources in an orderly fashion. When you add a new device to a PC, you sometimes need to set which IRQ number the device will use.

ISDN

Integrated Services Digital Network. The same lines are used for many different types of services, such as telephone, data, electronic mail and facsimile. ISDN specifications let large quantities of data (wide-bandwidth) flow from one location to another using the public telephone network. Under ISDN, a phone call can transfer 64 kilobits of digital data per second.

Keypad Commands

Combinations of digits that are used to configure TalkSwitch from a touchtone telephone.

Keypad (Telephone)

The push buttons on a telephone.

Key Telephone System

With Key Telephone Systems, access to telephone lines and calling features is controlled internally within each telephone unit. Users can gain direct access to telephone lines, etc. by pressing a key (or button) on their telephone.

LED

Light Emitting Diode. An electronic device that lights up when electricity is passed through it. LEDs are used in displays on electronic devices such as computers. TalkSwitch has five LEDs on its front panel. They show which telephone is in use, whether data is being transferred to or received from an attached PC, and which Mode setting is in use.

Link button

On most telephones, pressing the Link button has the same effect as pressing the Flash button or depressing and releasing the 'hang up' (switch) hook. However, on some telephones, the function of the Link button is internal to the telephone and pressing it will have no effect on TalkSwitch.

Modem

Acronym for MODulator-DEModulator. A modem is a device or program that converts digital information stored on a Computer into analog signals for transmission over telephone lines and, in reverse, converts analog signals into digital.

Modem (External)

A separate self-contained unit which attaches to your PC via a Serial Port or USB port.

Modem (Internal)

Modems that come as an expansion board that can be inserted into a vacant expansion slot on a PC. These are also called onboard modems.

Modem (voice/fax/data)

A modem which supports a switch to change between voice and data modes. In data mode, the modem acts like a regular modem. In voice mode, the modem acts like a regular telephone. Modems that support a voice/data switch have a built-in loudspeaker and microphone for voice communication.

Modes

A TalkSwitch feature which allows you to store two distinct incoming call handling configurations (Mode 1 and Mode 2).

Monitor (TalkSwitch Monitor)

A feature included with the Software Configuration package. The Monitor provides a graphical representation of telephone traffic as it flows through the TalkSwitch system.

Msec - Millisecond

One thousandth of a second or one thousand microseconds.

Network

A group of two or more computer systems linked together.

PBX

Private Branch Exchange. A PBX is a private telephone network used within an Enterprise. Access to telephone lines and services are controlled by the PBX. A PBX allows many users (extensions) to share a smaller number of telephone lines and have access to additional call handling benefits (call hold, intercom calling, etc.). TalkSwitch is a 'mini' or 'micro' PBX.

Phone Load

See Ringing Equivalency.

Prompt

Recorded instructions delivered by voice processing units. TalkSwitch provides prompts for you when using such features as Call Back, Call Bridge and Selective Call Forward. Prompts are also provided when configuring TalkSwitch using a telephone Keypad and for callers being put 'on hold'.

Registered Jacks

Telephone and data plugs registered with the FCC.

Ringing Equivalency

(Ringer Equivalency Number [REN]) A number, determined in accordance with the US Code of Federal Regulations, which represents the ringer loading effect on a line. A ringer equivalency number of 1 represents the loading effect of a traditional telephone set ringing circuit.

RJ-11

Registered Jacks 11 is the most common modular jack in the world. It is usually used to connect 'single line' telephonic devices such as telephones, fax machines and modems. It supports 2 conductors.

RJ-14

Registered Jacks 14 is a technical term for a telephone jack that looks similar to the standard RJ-11. However, the RJ-14 is usually used to connect 'two line' telephonic devices. It supports 4 conductors.

RJ-45

Registered Jacks 45 is a technical term for a telephone jack that supports 8 conductors and is used generally for Networking applications.

Prompted Call Back

Allows you to activate Call Back by dialing one of TalkSwitch's telephone numbers, letting the Auto Attendant answer and then entering the Call Back settings.

Routing

Determining the path that a message or call is to take over circuits. TalkSwitch offers 'routing' of incoming calls using DSP technology.

Serial Communication

A type of electronic communication that, unlike parallel communication, requires that data bits be sent one after the other. Modems rely on serial communication to send data over telephone lines.

Shortcut Key

A special key combination that causes a specific command to be executed. Typically, shortcut keys combine the Ctrl or Alt keys with some other keys. In Windows environments, for example, Ctrl +C is used as the shortcut key to copy. On PCs, the function keys are also often used as shortcut keys.

S/sec

Samples per second.

Serial Port

Serial Ports are physical 'plug-ins'. They allow two devices to exchange information or data. A Serial Cable is used to connect the two Serial Ports together.

SOHO

Acronym for Small Office/Home Office. It's a burgeoning market comprised of solo professionals, part-time work-at-homes, telecommuters and small businesses.

TAPI

Abbreviation of Telephony Application Programming Interface, TAPI, introduced in 1993 as the result of joint development by Microsoft and Intel, is a standard for applications connecting a PC running Windows to telephone services. TAPI defines standards for simple call control and for manipulating call content.

Telephony

The science of translating sound into electrical signals, transmitting them, and then converting them back to sound; that is, the science of telephones. The term is used frequently to refer to computer hardware and software that performs functions traditionally performed by telephone equipment.

Tel Lines 1, 2, 3, or 4

A jack or plug-in on the back panel of TalkSwitch which can accept a RJ-11 plug from either a telephone line or PBX system. A single line telephone cable can be plugged into this jack and will become a usable TalkSwitch Line.

Telephone Keypad

The collection of push buttons on a touchtone telephone.

Telephone Wall Jack

A wall outlet for a standard telephone jack.

Terminal Adapter

A device that allows analog devices to be used on ISDN (digital) lines. Terminal Adapters are somewhat similar to modems.

Touchtone telephone

A push-button telephone which emits distinctive (DTMF) tones as different buttons on the keypad are pressed.

Two Line Telephone

A telephone which allows you to make and receive calls on two separate telephone lines.

TX/RX

An acronym for transmit and receive.

USB

Short for Universal Serial Bus, the USB connection supports more bandwidth than a serial or parallel connection.

Virtual Extension

A telephone or other communications device not physically connected to TalkSwitch as an extension, but which provides the same functionality. In general, the term 'virtual' distinguishes something that is merely conceptual from something that has physical reality. TalkSwitch's Remote Extensions are virtual extensions.

Voicemail (Call Answer)

A service provided by TalkSwitch or telephone companies which gives callers the opportunity to leave a message when your extension or telephone line is busy or unanswered.

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